



ct,

### Region number supported by this unit

Region numbers are allocated to DVD players and software according to where they are sold.

- The region number of this unit is "1".
- This unit will play DVD-Video marked with labels containing "1", "2", "4", or "ALL".

Example:



**SUPER DRIVE** Omnivision




# Dear customer

Thank you for purchasing this product.  
For optimum performance and safety, please read these instructions carefully.



- These operating instructions are applicable to models SC-HT790V, SC-HT800V and SC-HT810V.
- Operations in these instructions are described mainly with the remote control, but you can do the operations on the main unit if the controls are the same.

## Accessories

 Please check and identify the supplied accessories.  
Use numbers indicated in parentheses when asking for replacement parts.

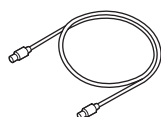
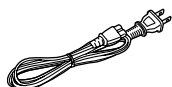
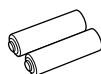
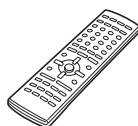
(Only for U.S.A.)

To order accessories contact 1-800-332-5368 or the website (<http://www.panasonic.com>).

(Only for Canada)

To order accessories, call the dealer from whom you have made your purchase.

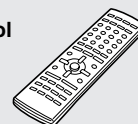
- ☐ 1 **Remote control**  
(EUR7623X50)
- ☐ 2 **Batteries**  
for remote control
- ☐ 2 **AC power supply cord**  
(RJA0065-1D)
- ☐ 1 **AM loop antenna**  
(N1DAAAA00002)
- ☐ 1 **FM indoor antenna**  
(RSA0007-J)
- ☐ 1 **Video cable**  
(RJL1P016B15A)
- ☐ 1 **75  $\Omega$  coaxial cable**  
(VJA1125)
- ☐ 1 **System cable**  
(K1HA25HA0001)
- ☐ 5 **Speaker cables**  
(RFA2163-J)  
3×4-m (13-foot) cables  
2×10-m (33-foot) cables
- ☐ 1 **Sheet of speaker-cable stickers**
- ☐ 1 **Antenna plug**  
(K2RC021B0001)



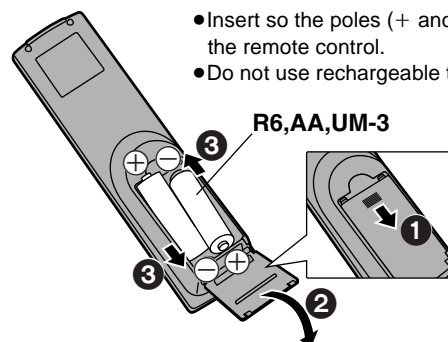
System	SC-HT790V	SC-HT800V	SC-HT810V
Main unit	SA-HT790V	SA-HT800V	SA-HT810V
Front speakers	SB-FS803	SB-FS803	SB-FS700
Center speaker	SB-PC803	SB-PC803	SB-PC700
Surround speakers	SB-FS803	SB-FS803	SB-FS801A
Active subwoofer	SB-WA312	SB-WA310	SB-WA330

## The remote control

Remote control



Batteries



- Insert so the poles (+ and -) match those in the remote control.
- Do not use rechargeable type batteries.

### Do not;

- mix old and new batteries.
  - use different types at the same time.
  - heat or expose to flame.
  - take apart or short circuit.
  - attempt to recharge alkaline or manganese batteries.
  - use batteries if the covering has been peeled off.
- Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire.

Remove if the remote control is not going to be used for a long period of time. Store in a cool, dark place.

### Use

Aim at the sensor (➡ page 9), avoiding obstacles, at a maximum range of 7 m (23 feet) directly in front of the unit.

### User memo:

DATE OF PURCHASE \_\_\_\_\_  
DEALER NAME \_\_\_\_\_  
DEALER ADDRESS \_\_\_\_\_  
TELEPHONE NUMBER \_\_\_\_\_

The model number and serial number of this product can be found on either the back or the bottom of the unit.  
Please note them in the space provided below and keep for future reference.

MODEL NUMBER \_\_\_\_\_  
SERIAL NUMBER \_\_\_\_\_

### Note

The included AC power supply cord is for use with this unit only. Do not use it with other equipment.

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INTRO



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## CAUTION!

DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.

## CAUTION:

TO PREVENT ELECTRIC SHOCK MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

## WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE, DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

## CAUTION!

THIS PRODUCT UTILIZES A LASER. USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE. DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

## Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

CAUTION	- LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.	FDA 21 CFR / Class II
CAUTION	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.	IEC60825-1 / Class 3b
VARNING	- SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN.	
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLNING VED ÅBNING. UNNGÅ UDSÆTTELSE FOR STRÅLING.	
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLNING NÄR DEKSEL ÅPNES. UNNGÅ EKSPOSITIONER FOR STRÅLEN.	
VARO!	- AVATTAESSA OLET ALLTIJAIN NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTELYLLE. ÄLÄ KATSO SÄTEESEEN.	
VORSICHT	- SICHTBARE UND UNSICHTBARE LASERSTRÄHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.	
ATTENTION	- RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FASCICEL.	
注意	- 打开时有可见及不可见激光辐射。避免激光照射。	
注意	- ここを開くと可視及び不可視レーザー光が出ます。 ビームを見たり、触れたりしないで下さい。	RQLXS0054

(Inside of product)

THE FOLLOWING APPLIES ONLY IN THE U.S.A.:

## CAUTION:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any unauthorized changes or modifications to this equipment would void the user's authority to operate this device.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



## CAUTION

RISK OF ELECTRIC SHOCK  
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE SCREWS. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**Avoid use or placing highly magnetic devices (Speakers etc.) or devices that emit strong electro-magnetic waves (mobile telephones etc.) near the main unit.**

- The above may result in problems with audio and video, and recorded content may be lost.
- Be extra cautious when you are using a plasma television, keeping these devices as far away as possible.

## Stacking

Place the unit in a horizontal position, and do not place anything heavy on it.

Before moving the unit, ensure the disc tray and video cassette slot is empty. Failure to do so will risk severely damaging the disc, video cassette tape and the unit.

- Operating while there is condensation in the unit or on the cassette tape may cause the tape to catch upon the cylinder resulting in the tape being cut, or not being able to remove the cassette tape from the unit. The unit also may not work properly if the unit's cylinder or heads have been damaged.
- Wait 1–2 hours for condensation to evaporate (do not operate the unit during this time).

# IMPORTANT SAFETY INSTRUCTIONS

Read these operating instructions carefully before using the unit. Follow the safety instructions on the unit and the applicable safety instructions listed below. Keep these operating instructions handy for future reference.

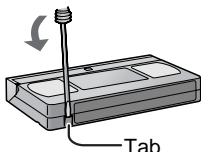
- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



## Tape information

### ■ Tapes

- You can use tapes with the VHS and S-VHS marks, but this unit is unable to make full use of the characteristics of S-VHS tapes.
- Break out the tape's tab to prevent accidental erasure. Cover the hole with a double layer of adhesive tape when you want to use the tape for recording again.



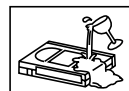
### ■ S-VHS Quasi Playback (SQPB)

You can play tapes recorded with the S-VHS system, however some noise may occur with some types and this unit cannot take advantage of S-VHS's high resolution. This VCR cannot make S-VHS recordings.





### ■ Tape care

Poor quality or damaged tapes can cause the heads to become dirty and malfunction. Store your tapes carefully and discard when they become dirty or damaged.

Never use tapes on which juice has been split or those that are extremely damaged since this will not only cause the heads to become dirty, but will also make the unit malfunction.



## ■ Discs that can be played

Disc type	Logo	
DVD-RAM		
DVD-Audio		
DVD-Video		
DVD-R		
Video CD		
CD		
CD-R/RW	—	

- Use discs with the above logos and that conform to the international standard. The unit cannot play other discs correctly.
- Do not use irregularly shaped discs (e.g. heart-shaped discs). This can damage the unit.
- It may not be possible to play CD-R, CD-RW, DVD-R, DVD-RW, DVD-RAM in all cases due to the type of disc or recording method.

## ■ Discs that cannot be played

PAL discs (except DVD-Audio), DVD-ROM, CD-R, CD-RW, DVD-RW, CVD, SVCD, SACD, Divx Video, DVD-RAM that cannot be removed from their case, and 5.2-GB DVD-RAM.

## ■ Disc structure

Disc structure and the labels given to the items on the disc type.

**Track:** the smallest division on DVD-Audio, CD-R, CD-RW, or a single WMA/MP3 file.

**Chapter:** the smallest division on DVD-Video.

**Group:** collections of tracks on DVD-Audio and folders or albums on data discs.

**Title:** the largest division on DVD-Video, used for a movie.

**Program:** the division on DVD-RAM equivalent to a movie.

**Picture:** a single JPEG file.

**Play list:** the largest grouping on a HighMAT disc, used for scenes on DVD-RAM.

**Scene:** DVD-RAM program sections specified as play lists on a DVD video recorder.

**Content:** covers tracks and pictures on HighMAT

D, CD

wipe dry.

D-R

an optional DVD-RAM/PD disc cleaner (LF-K200DCA1, available).

use cloths or cleaners for CDs etc.

## Handling precautions

- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not attach labels or stickers to discs. (Do not use discs with exposed adhesive from tape or left over peeled-off stickers.)
- Do not use scratch-proof protectors or covers.
- Do not use discs printed with label printers available on the market.



• If **[SHIFT]** appears after the button name the function will not work unless you use with **[SHIFT]** button. Make sure to press **[SHIFT]** and the button.

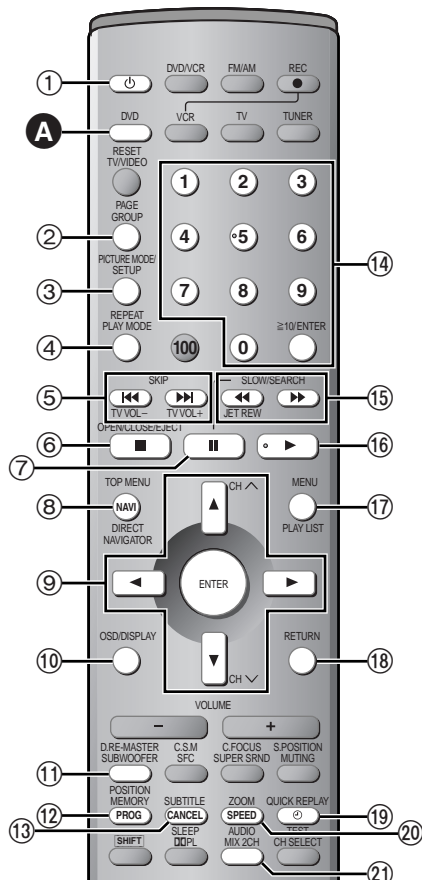
## Remote control—common buttons



- ① **Main unit selector button**  
**DVD/VCR source button [DVD/VCR]**  
 Switch the source on the main unit between DVD and VCR.  
**Tuner/band button [FM/AM]**  
 Switch the source on the main unit to TUNER and change the band.
- ② **Remote control mode selector button**  
**[DVD] [VCR] [TV] [TUNER]**  
 Changes the remote control mode. The button lights once pressed.  
 The selected mode is held in memory until you press another mode selector button.  
 The mode selector button lights each time you press an operational control button showing which mode is in use.
- ③ **Volume buttons [VOLUME - , +]** ..... 18  
 Volume may be lower when playing DVD-Video than when playing other discs or during television broadcasts. Reduce the volume before playing other sources or returning to the television so volume doesn't increase suddenly.
- ④ **Bass adjust button [SUBWOOFER]** ..... 51
- ⑤ **Sound field control button [SFC]** ..... 50
- ⑥ **Custom sound memory button [C.S.M] [SHIFT]** ..... 49
- ⑦ **Shift button [SHIFT]**  
 To use the functions labeled in orange, press the button while pressing **[SHIFT]**.
- ⑧ **Dolby Pro Logic button [DOLBY]** ..... 50
- ⑨ **Sleep timer button [SLEEP] [SHIFT]** ..... 48
- ⑩ **Muting button [MUTING]** ..... 48
- ⑪ **Seat position button [S.POSITION] [SHIFT]** ..... 51
- ⑫ **Super surround button [SUPER SRND]** ..... 50
- ⑬ **Center focus button [C.FOCUS] [SHIFT]** ..... 51
- ⑭ **Speaker channel button [CH SELECT]** ..... 51
- ⑮ **Test signal button [TEST] [SHIFT]** ..... 51
- ⑯ **Down-mix button [MIX 2CH]** ..... 50



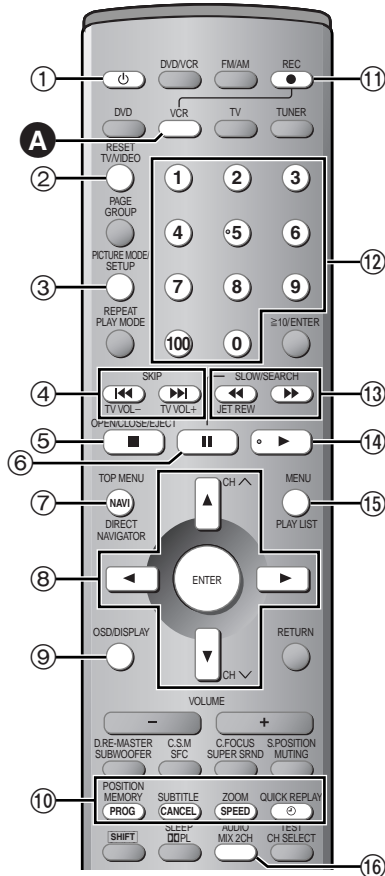
## Remote control—DVD operation



- ① **DVD remote control mode button [DVD]** ..... 17  
 Switch the remote control mode to DVD. Make sure you press before doing DVD operations. When in DVD mode, the **[DVD]** button lights each time you press one of the DVD operation buttons indicated below.
- ② **Power button [⏻]** ..... 17  
 Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- ③ **Group button [GROUP]** ..... 20
- ④ **Still picture select button [PAGE] [SHIFT]** ..... 20
- ⑤ **DVD SETUP menu button [SETUP]** ..... 17, 32
- ⑥ **Play mode button [PLAY MODE]** ..... 25
- ⑦ **Repeat mode button [REPEAT] [SHIFT]** ..... 21
- ⑧ **Skip buttons [⏮, ⏭] SKIP** ..... 18
- ⑨ **Stop button [■]** ..... 18
- ⑩ **Open/close button [OPEN/CLOSE/EJECT] [SHIFT]** ..... 18
- ⑪ **Pause button [⏸]** ..... 18
- ⑫ **Top menu button [TOP MENU]** ..... 19
- ⑬ **Direct navigator button [DIRECT NAVIGATOR]** ..... 24
- ⑭ **Cursor buttons [▲, ▼, ◀, ▶]**  
 Enter button **[ENTER]** ..... 17
- ⑮ **On-screen menu icon button [OSD/DISPLAY]** ..... 28
- ⑯ **Double re-master button [D.RE-MASTER] [SHIFT]** ..... 27
- ⑰ **Position memory button [POSITION MEMORY]** ..... 19
- ⑱ **Cancel button [CANCEL]** ..... 21
- ⑲ **Subtitle button [SUBTITLE] [SHIFT]** ..... 26
- ⑳ **Numbered buttons [1-9, 0, ≥10/ENTER]** ..... 20
- ㉑ **Slow/search buttons [⏮, ⏭] SLOW/SEARCH** ..... 18
- ㉒ **Play button [▶]** ..... 18
- ㉓ **Menu button [MENU]** ..... 19
- ㉔ **Play list button [PLAY LIST]** ..... 24
- ㉕ **Return button [RETURN]** ..... 17
- ㉖ **Quick replay button [QUICK REPLAY]** ..... 20
- ㉗ **Zoom button [ZOOM]** ..... 27
- ㉘ **Soundtrack button [AUDIO] [SHIFT]** ..... 26

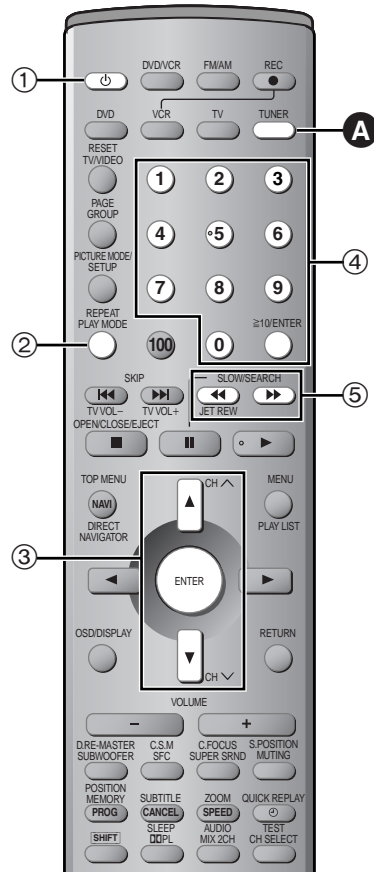
• If **[SHIFT]** appears after the button name the function will not work unless you use with **[SHIFT]** button. Make sure to press **[SHIFT]** and the button.

## Remote control—VCR operation



- A VCR remote control mode button [VCR].....34**  
Switch the remote control mode to VCR. Make sure you press before doing VCR operations. When in VCR mode, the [VCR] button lights each time you press one of the VCR operation buttons indicated below.
- 1 Power button [⏻] .....15**  
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- 2 TV/Video button [TV/VIDEO].....16**  
**Tape counter reset button [RESET] [SHIFT] .....45**
- 3 Picture mode button [PICTURE MODE].....35**
- 4 Index search button [◀◀, ▶▶] SKIP.....41**
- 5 Stop button [■] .....34**  
**Cassette eject button [OPEN/CLOSE/EJECT] [SHIFT] .....34**
- 6 Pause button [⏸].....34**
- 7 Jet navigator button [NAVI] .....40**
- 8 Cursor buttons [▲, ▼, ◀, ▶]**  
**Enter button [ENTER] .....38**  
**Channel, tracking, and vertical hold buttons**  
[▲ CH▲] [▼ CH▼].....35, 36
- 9 On-screen display button [OSD/DISPLAY] .....45**
- 10 Timer recording buttons .....38**  
**Timer programming button [PROG]**  
**Cancel button [CANCEL]**  
**Tape speed button [SPEED]**  
**Timer program standby button [⏻]**
- 11 Recording button [● REC] .....36**
- 12 Numbered buttons [1–9, 100, 0].....36**
- 13 Fast-forward/rewind button [◀◀, ▶▶] SLOW/SEARCH]...34**  
**Jet rewind button [◀◀ JET REW] [SHIFT] .....34**
- 14 Play button [▶] .....34**  
Press and hold for five seconds to start repeat play. ....35
- 15 Menu button [MENU].....42**
- 16 Audio button [AUDIO] [SHIFT] .....45**

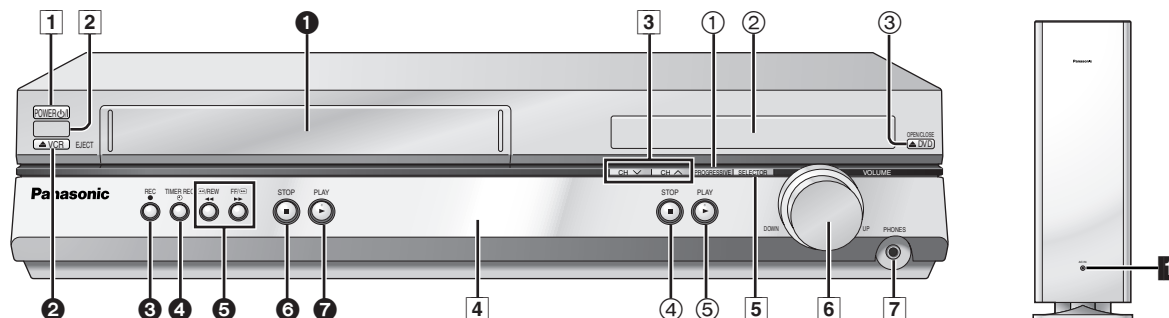
## Remote control—TUNER operation



- A TUNER remote control mode button [TUNER].....46**  
Switch the remote control mode to TUNER. Make sure you press before doing TUNER operations. When in TUNER mode, the [TUNER] button lights each time you press one of the TUNER operation buttons indicated below.
- 1 Power button [⏻] .....46**  
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- 2 FM mode button [PLAY MODE] .....46**
- 3 Channel buttons [▲ CH▲] [▼ CH▼]**  
**Enter button [ENTER] .....46**
- 4 Numbered buttons [1–9, 0, ≥10/ENTER].....46**
- 5 Tuning buttons [◀◀, ▶▶] .....46**



## Main unit and subwoofer



### Common buttons

- 1 Power button [POWER ⏻/I]** ..... 15  
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- 2 Remote control signal sensor**
- 3 Channel buttons [CH V] [CH ^]** ..... 36, 46
- 4 Display**
- 5 Source selector buttons [SELECTOR]**  
VCR → DVD → FM → AM
- 6 Volume dial [VOLUME DOWN, UP]** .....  
Volume may be lower when playing DVD-Video than when playing other discs or during television broadcast. Adjust volume before playing other source material. Otherwise, so volume doesn't increase.
- 7 Headphone terminal**

### DVD section

- 1 Progressive video button [PROGRESSIVE]** ..... 18
- 2 Disc tray** ..... 18
- 3 Open/close button [▲ DVD OPEN/CLOSE]** ..... 18
- 4 Stop button [■ STOP]** ..... 18
- 5 Play button [▶ PLAY]** ..... 18

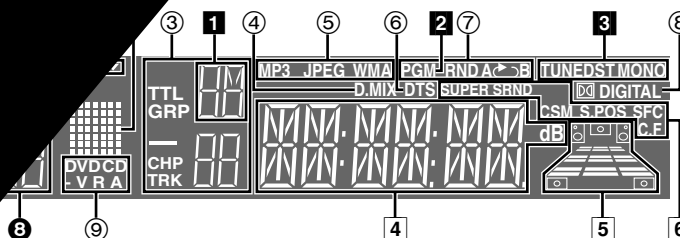
### VCR section

- 1 Tape eject button [TAP EJECT]** ..... 34
- 2 Stop button [■ STOP]** ..... 34
- 3 Rewind button [◀ REW]** ..... 34
- 4 Fast forward button [▶ FF]** ..... 34
- 5 Play button [▶ PLAY]** ..... 34

### Subwoofer

- 1 AC power supply indicator [AC IN]** .....  
This indicator lights when the subwoofer is connected to a household AC outlet.

## Main unit display



- 7 Play sequence indicator**  
PGM: During program play. .... 25  
RND: During random play ..... 25  
◀ : During repeat ..... 21  
A ▶ B: During A-B repeat ..... 21
- 8 Dolby Digital indicator** ..... 50
- 9 Disc type indicator** ..... 6

### VCR operation

- 1 Video cassette indicator**  
Shows whether you have loaded a video cassette.
- 2 VCR selector indicator** ..... 34  
Lights when the selector is in VCR mode. Flashes for about 5 seconds immediately after selection is made.
- 3 Tape remaining display indicator** ..... 45
- 4 Tape speed indicator** ..... 36
- 5 Timer program recording indicator** ..... 38
- 6 Operation display** ..... 34  
Displays play, fast-forward, or rewind, etc.
- 7 Recording indicator** ..... 36
- 8 Channel display**

### Tuner operation

- 1 Band display**
- 2 Preset indicator** ..... 46
- 3 Radio broadcast display** ..... 46  
TUNED: Receiving radio signal  
ST: Stereo  
MONO: Forced monaural

# Simple setup

## STEP 1 Locating



### •Use only supplied speakers

Using other speakers can damage the unit and sound quality will be negatively affected.

- Set the speakers up on an even surface to prevent them from falling. Take proper precautions to prevent the speakers from falling if you cannot set them up on an even surface.

### Positioning for best effect

How you set up your speakers can affect the bass and the sound field. Note the following points.

- Place speakers on flat secure bases.
- Placing speakers too close to floors, walls, and corners can result in excessive bass. Cover walls and windows with thick curtain.

### Main unit

#### Note

Keep your speakers at least 10 mm ( $\frac{13}{32}$ " ) away from the system for proper ventilation.

### Center speaker

- You can also put this speaker directly under the television.
- Vibration caused by the center speaker can disrupt the picture if it is placed directly on the television. Put the center speaker on a rack or shelf.

### Subwoofer

Place to the right of the television, on the floor or a sturdy shelf so that it won't cause vibration.

Leave 10 cm (4") on the right for the woofer to be effective. Leave 10 cm (4") at the rear for ventilation.

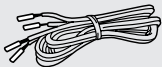
### Notes on speaker use

- You can damage your speakers and shorten their useful life if you play sound at high levels over extended periods.
- Reduce the volume in the following cases to avoid damage.
  - When playing distorted sound.
  - When the speakers are receiving howling from a record player, noise from FM broadcasts, or continuous signals from an oscillator, test disc, or electronic instrument.
  - When adjusting the sound quality.
  - When turning the unit on or off.

## STEP 2 Speakers

### Speaker cables

- 3×4-m (13-foot) cables
- 2×10-m (33-foot) cables

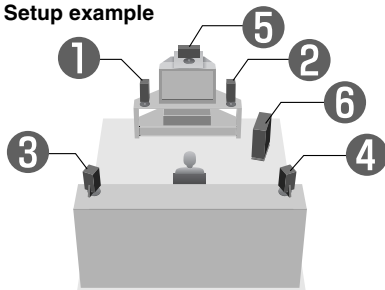


### Sheet of speaker-cable stickers



The illustrations show SC-HT810V.

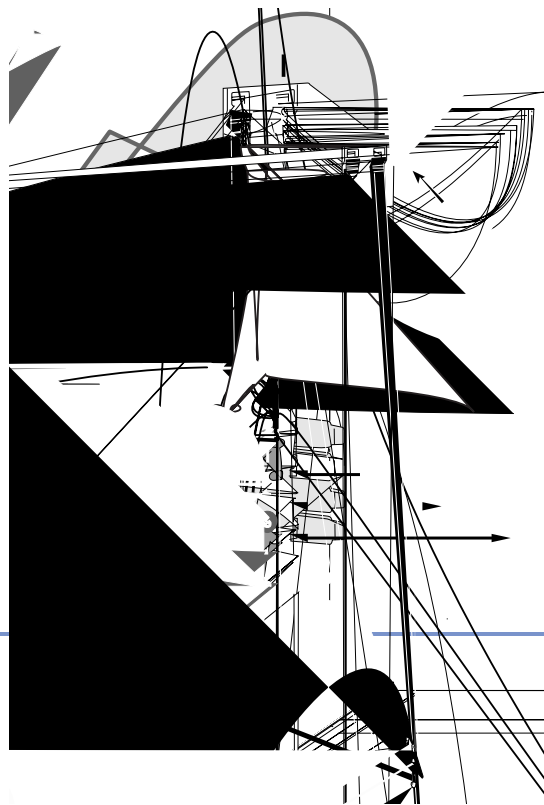
### Setup example



## 1 Attaching the stickers to the speaker cables

Attach the speaker-cable stickers to make connection easier.

## 2 Connecting the speakers



### Keeping the cables out of the way (SC-HT810V only)

Pass the cables through the holes in the stand to keep them out of the way.

### Note

- Never short-circuit positive (+) and negative (–) speaker wires.
- Be sure to connect only positive (copper) wires to positive (+) terminals and negative (silver) wires to negative (–) terminals. Incorrect connection can damage the speakers.

### Caution

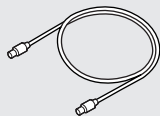
Hold the speakers by the sides.  
Applying pressure to the front net can damage the speaker.



# STEP 3 Television

## Basic connection

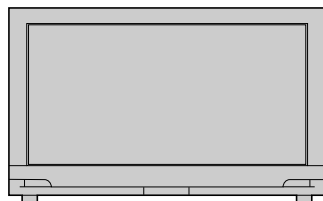
75  $\Omega$  coaxial cable



Video cable



Television  
(not included)



VIDEO  
IN

VHF/UHF  
RF IN

Video cable  
(included)

75  $\Omega$  coaxial  
cable  
(included)

If the connector  
doesn't match  
➔ page 55

Main unit



If the connector  
doesn't match  
➔ page 55

Antenna cable  
(usually disconnected  
from the television)

### 75 $\Omega$ coaxial cable

This cable carries broadcast signals to the television whether the unit is on or off so you do not need to connect the antenna directly to the television.

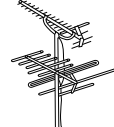
It does not carry other signals from this unit, so make sure you connect the television to VIDEO OUT. Contact your dealer if your television does not have the corresponding terminal.

### Connect video cables directly to your television

The video signals on DVDs and videotapes have copyright protection. The video may not be shown correctly if you connect through an A/V selector or other equipment.

From

Cable TV



Outdoor antenna

Indoor antenna

### To enjoy cable and satellite television

Connection ➔ page 54

Subscribe to a cable or satellite company.

### If irregular coloring occurs on your television

The supplied speakers are designed to be used close to a television, but the picture may be affected with some televisions and setup combinations.

**If this occurs, turn the television off for about 30 minutes.**

The television's demagnetizing function should correct the problem. If it persists, move the speakers further away from the television.

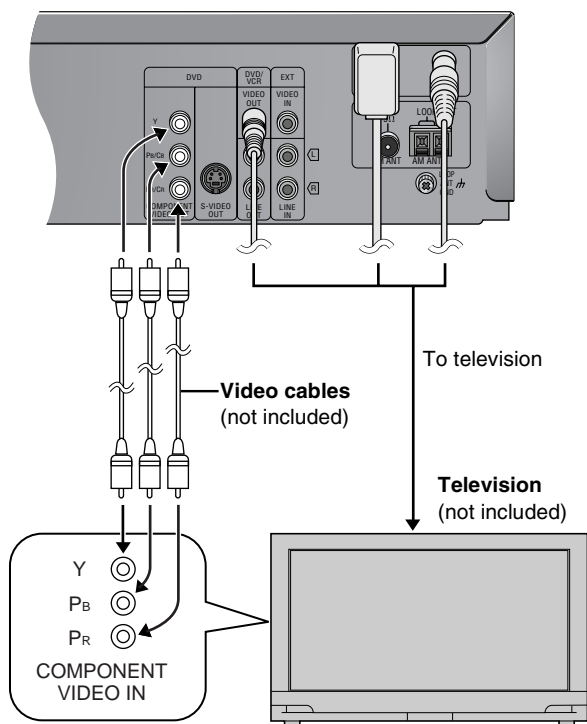


## For better video from DVD

The following connections are for video from the DVD section only. Make sure you have connected the VIDEO OUT terminal with the television to view video from the VCR section (➡ page 12).

You may need to change the video-input mode on the television to view video from the VCR and DVD sections. Read your television's operating instructions for details.

### ■ Connecting a television with COMPONENT VIDEO terminals



#### COMPONENT VIDEO OUT terminal

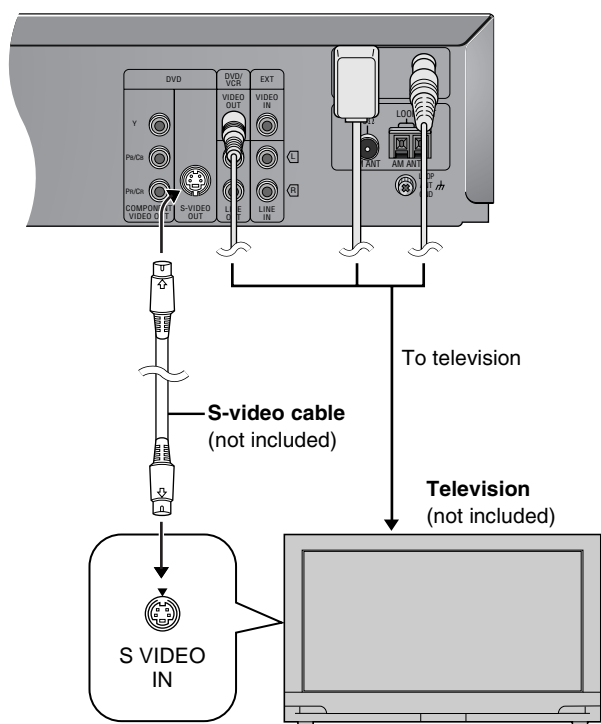
These terminals can be used for either interlace or progressive output and provide a purer picture than the S-VIDEO OUT terminal. Connection using these terminals outputs the color difference signals (Pb/P<sub>R</sub>) and luminance signal (Y) separately in order to achieve high fidelity in reproducing colors.

- The description of the component video input terminals depends on the television or monitor (e.g. Y/P<sub>B</sub>/P<sub>R</sub>, Y/B-Y/R-Y, Y/C<sub>B</sub>/C<sub>R</sub>). Connect to terminals of the same color.
- After making this connection, change the black level for a better picture (➡ page 31, Video—Black Level Control).

#### To enjoy progressive video

- Connect to the component video input terminals on a 480P compatible television. (Video will not be displayed correctly if connected to an incompatible television.)
- All televisions manufactured by Panasonic and that have 480P input connectors are compatible. Consult the manufacturer if you have another brand of television.

### ■ Connecting a television with an S-VIDEO IN terminal



#### S-VIDEO OUT terminal

The S-video terminal achieves a more vivid picture than the VIDEO OUT terminal by separating the chrominance (C) and luminance (Y) signals. (Actual results depend on the television.)

#### Note

Connect to a different terminal group than that you used for the video cable (e.g., "VIDEO 2").

Picture from this unit's VCR will not appear when you use the same group input terminal connections because the S-video terminal input takes precedence.

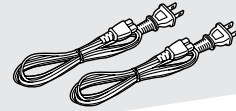
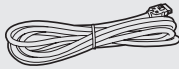


# STEP 4

## Connecting the subwoofer, antennas, and AC power supply cords

Match the Rating, Cable Supply, and House Supply Cord  
(AC 120 V, 60 Hz)

System cable



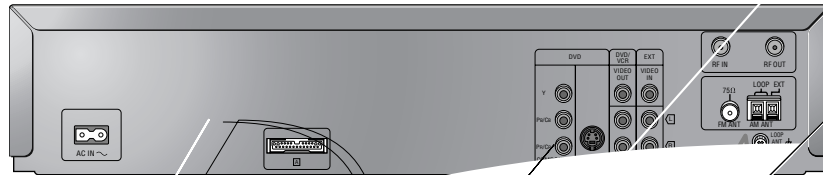
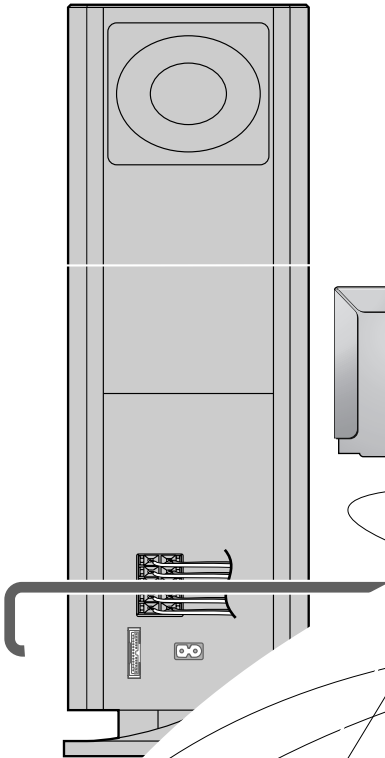
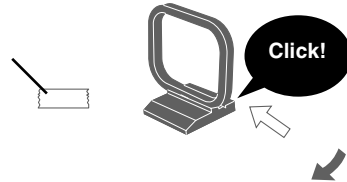
Connect the AC power supply cord after all other connections are complete.



AC power supply cord



To household AC outlet  
(AC 120 V, 60 Hz)



To disconnect  
Press the catch  
and pull out.

White

Red/Black

Unscrew the terminal  
with a Phillips-head  
screwdriver.

To disconnect  
Press the catch  
and pull out.

### AC power supply cords

Connect both AC power supply cords to enjoy all the features of this system.

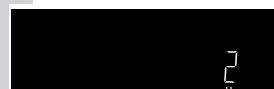
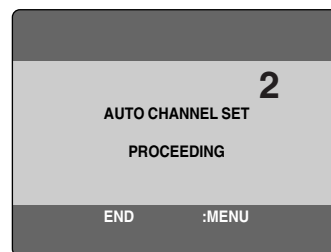
Power  
consumes a small amount of power, even when it is  
amount of power used depends on the display  
page 44):  
ON: 3.7 W DIM: 3.5 W OFF: 2.4 W

### Audio memory backup

To save power when the unit is not to be used for a long time,  
unplug it from the household AC outlet.  
Remember to reset the radio stations and any other memory items  
before using the unit again.  
Information you enter into the unit's memory remains intact for up  
to 2 weeks after the subwoofer's AC power supply cord is  
disconnected.

Main unit





Disappears → 2

Antenna system and channel captions all revert to the default values when you perform the procedure above. Reset the timer recording settings. (If necessary reset the clock first. → page 42, CLOCK SET)

## STEP 6 Operating the television



### ■ TV maker setting

You can control the television by entering the remote control code.

**1 Refer the chart below for the code for your television.**

**2 Aiming the remote control at the television**

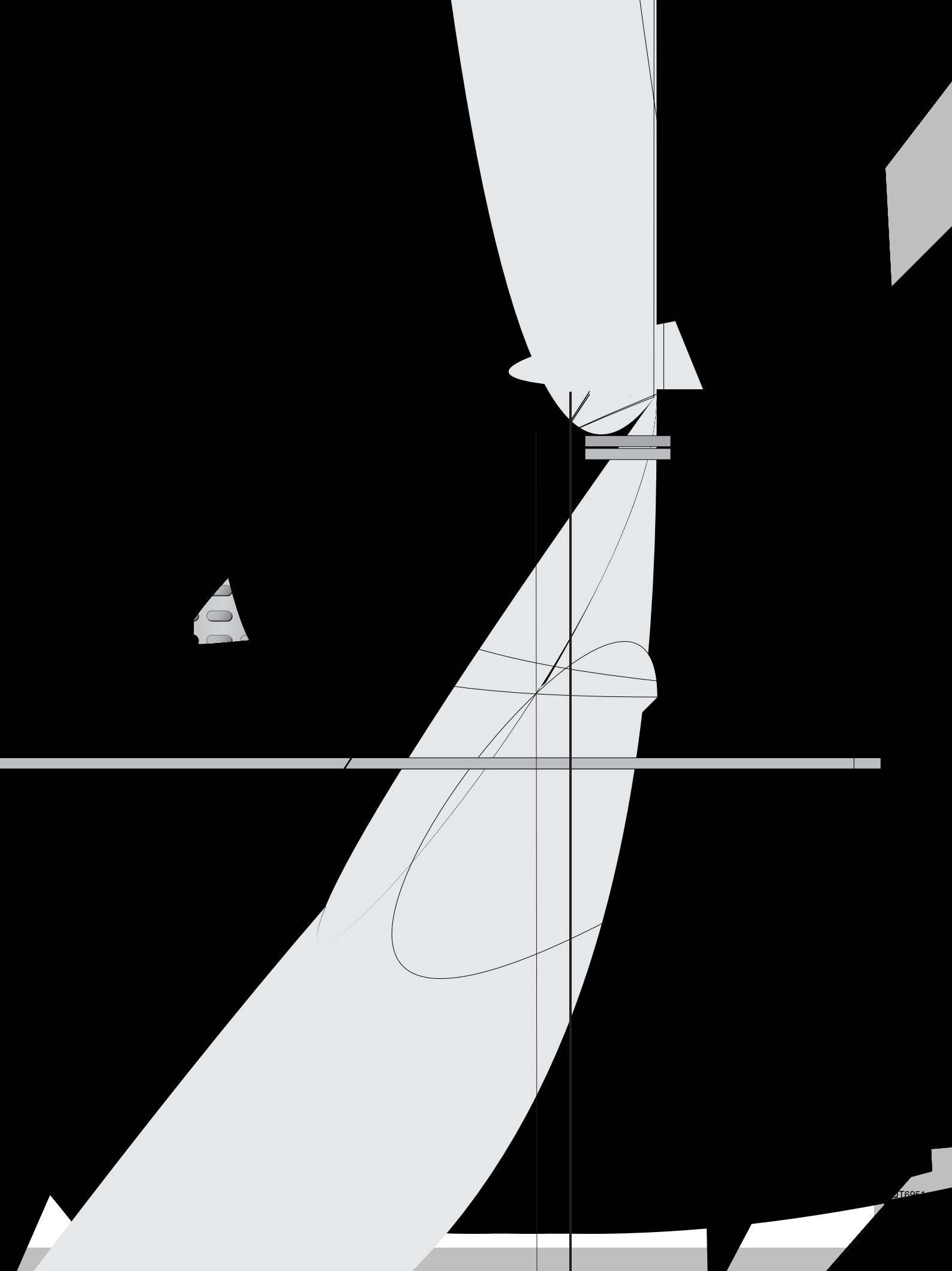
**While pressing and holding [TV], press the numbered buttons to enter the code number.**

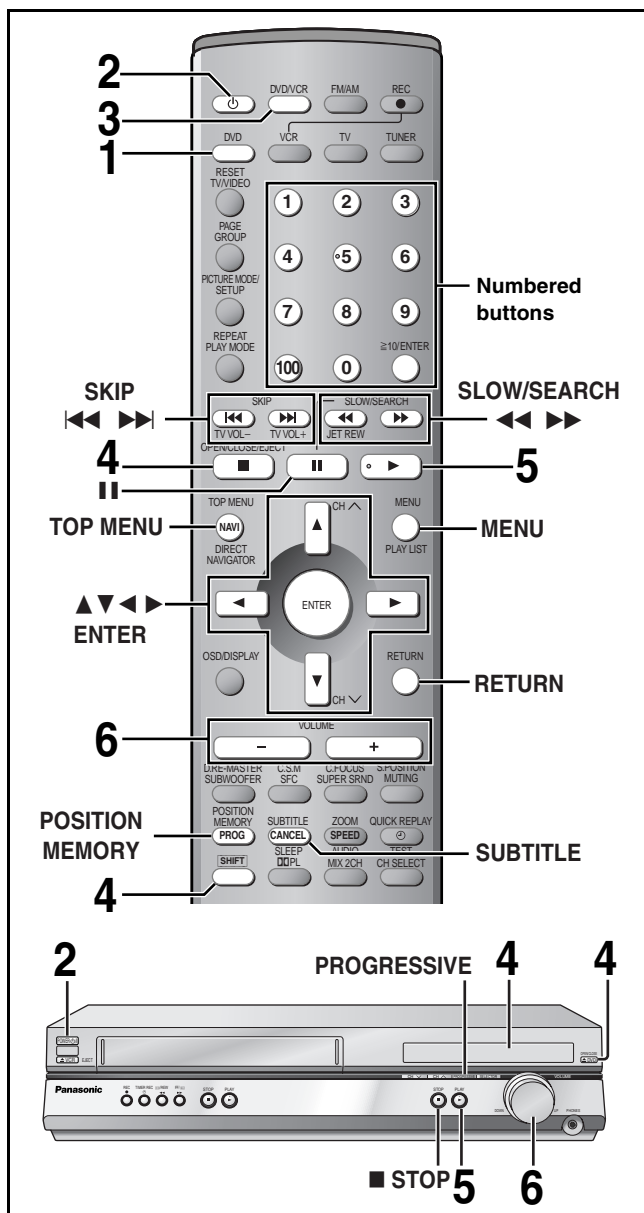
- Example: To select 01, press [0] ➔ [1].
- The remote control outputs the on/off signal. If the code is correct, the equipment turns on or off. If it doesn't, try entering another code.

### Note

- If your television brand is not listed or if the code listed for your television does not allow control of your television, this remote control is not compatible with your television.
- Reenter the codes after you change the batteries.

### ■ TV operation





RAM DVD-A DVD-V VCD CD WMA MP3 JPEG

### ■ To enjoy progressive video

Press [PROGRESSIVE] on the main unit so “PR ON” appears on the display.



**To check whether progressive output is on or off**  
Press [PROGRESSIVE]. “PR ON” (on) or “PR OFF” (off) appears on the display.

#### Note

- The television will be disrupted for a moment but this is normal.
- Output from this unit is interlace if you have connected to the television through VIDEO OUT or S-VIDEO OUT terminals, irrespective of the setting.
- When progressive output is on, closed captions will not be displayed.

### Preparation

Turn on the television and select the video input for the DVD.

**1 Press [DVD] to put the remote control in DVD mode.**

**2 Press [⏻] to turn on the unit.**

**3 Press [DVD/VCR] to select “DVD” as the source.**

The following indicator appears when you select DVD.



**4 Press [SHIFT]+[OPEN/CLOSE/EJECT] to open the disc tray and place the disc.**

- If the disc contains both audio data (WMA and MP3) and JPEG, check “Mixed Disc—Audio & Stills” in the SETUP menu (➡ page 31). Select “Stills (JPEG)” or “Audio (MP3/WMA)”.

- Load double-sided discs so the label for the side you want to play is facing up.



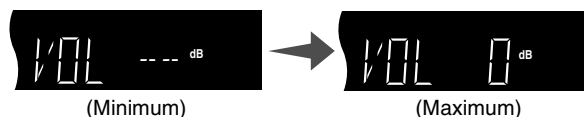
**5 Press [▶] (play).**

The disc tray closes and play begins. It is normal for sound and pictures to take time to start.

**[WMA] [MP3] [CD]** (CD text only)

Track information appears on the television. Press [SHIFT]+[SUBTITLE] to turn the display on or off.

**6 Adjust the volume.**



<b>Stop</b>	Press [■] (➡ page 19, Resume function).
<b>Pause</b>	Press [⏸].
<b>Skip</b>	Press [◀◀] (backward) or [▶▶] (forward). Group skip [JPEG] Press [▼] (backward) or [▲] (forward).
<b>Search</b>	Press [◀◀] (backward) or [▶▶] (forward). You can turn off the sound (➡ page 31, Audio—Audio during Search).
<b>Slow</b>	While paused, press [◀◀] (backward) or [▶▶] (forward).
<b>Frame-by-frame</b>	While paused, press [◀] (backward) or [▶] (forward). Press and hold to change in succession. Or, press [⏸] repeatedly for forward frame-by-frame.

#### Notes

- Press [▶] (PLAY) to restart play.
  - The speed of search and slow-motion increases up to 5 steps.
- When playing Video CDs**
- You cannot move backwards during slow-motion and frame-by-frame.
  - Pressing buttons to perform skip, search or slow-motion may take you to a menu screen.

#### Note

- If “⊘” appears on the television  
The operation is prohibited by the unit or disc.

### When a menu appears on the television

DVD-A DVD-V VCD

Press [**▲**, **▼**, **◀**, **▶**] to select an item and [ENTER] to confirm.  
Or, press the numbered buttons.

To select a 2-digit number

e.g. 23: [≥10] ➡ [2] ➡ [3].

Press [TOP MENU] to show the top menu.

Press [MENU] to show a menu.

Press [RETURN] to show a menu. VCD

#### Note

The disc continues to rotate while the menu is displayed even after you finish playing an item. Press [■] when you finish to preserve the unit's motor and your television screen.

### Position Memory function

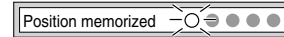
RAM DVD-A DVD-V VCD CD WMA MP3

(When the elapsed play time is displayed)

JPEG

During play

Press [POSITION MEMORY] to memorize a position.



Press again to replace the position.

This position is saved even if you turn the unit off, change the source or open the disc tray. When you turn the unit on, reselect DVD or reinsert the disc whose position you memorized, "▷" flashes on the display. Press [▶] (play) to start play from the memorized position. The position is cleared.

- You can memorize positions on up to five different discs at a time. When you memorize another position, the earliest position is replaced.

### Resume function

"▷" flashes on the display when the unit has recorded the position at which you stopped play.

Press [▶] (play) to start play from that position.

- The position is cleared when you:
  - Turn the unit off.
  - Select another source.
  - Open the disc tray.
- Press [■] to clear the position.

### Chapter Preview

DVD-V

The following message appears immediately after you press [▶] (play) when "▷" is displayed.

Press [▶] (play) while the message is displayed and the beginning portions of each chapter up to the current one are played.

Full play resumes from the point where you pressed [■] or [POSITION MEMORY].

(This feature works only within a title.)

If you do not press [▶] (play), the message disappears and play starts from where you pressed [■] or [POSITION MEMORY].

Press PLAY to Preview Chapters





DVD-A WMA MP3 JPEG

**1 Press [GROUP].**

**2 Press [▲, ▼] to select the group number and press [ENTER].**

**3 Press [▲, ▼] to select the track/picture number and press [ENTER].**

• You can also select the group and track/picture number with the numbered buttons.

**DVD-A**

• **Playing all the groups in succession** (⇒ page 25, All group play)

• **Playing bonus groups**

Some discs contain bonus groups. If a password screen appears after selecting a group, enter the password with the numbered buttons. Refer also to the disc's jacket.

**JPEG**

While a picture is displayed

**1 Press [OSD/DISPLAY] until the disc information screen is displayed (⇒ page 29).**

**2 Press [◀, ▶] to select “Angle” and press [▲, ▼] to select the rotation angle.**

The picture rotates ninety degrees each time you do this.

0 ↔ 90 ↔ 180 ↔ 270



## Replaying a scene—QUICK REPLAY

RAM DVD-A DVD-V VCD CD WMA MP3:

Skip back a few seconds within the current item (program, track or title).

**JPEG:** Skip back a few pictures.

During play

**Press [QUICK REPLAY].**

**Note**

This feature may not work while playing some parts of a disc or at all with some discs.

## Starting play from a selected item

RAM DVD-A DVD-V VCD CD

**Press the numbered buttons.**

To select a 2-digit number

e.g. 23: [≥10] → [2] → [3].

WMA MP3 JPEG

**Press the numbered buttons then press [ENTER].**

e.g. 123: [1] → [2] → [3] → [ENTER].

• This works only when stopped with some discs.

• When playing DVD-Audio and you want to start play from a track in a different group, select the group first (⇒ right).



## Repeat play

RAM DVD-A DVD-V VCD CD WMA MP3

(When the elapsed play time is displayed)

JPEG

During play

Press

[SHIFT]+[REPEAT].

Each time you do this:

RAM

Program→All (Entire disc)→Off

•During play list play

Scene→Playlist→Off

DVD-V

Chapter→Title\*→Off

VCD CD

Track→All (Entire disc)→Off

DVD-A WMA MP3

Track→Group\*→Off

JPEG

Group→Off

\*During all group (DVD-A), program and random play "All" is displayed.

You can also repeat play of content and group on HighMAT discs.

DVD-A DVD-V VCD CD WMA MP3

### ■ To repeat only your favorite tracks/chapters

Start program play (⇒ page 25) and press [SHIFT]+[REPEAT] to display "All".

## A-B repeat play

RAM DVD-A DVD-V VCD CD WMA MP3

(When the elapsed play time is displayed)

You can repeat a section between points A and B within an item.

1 During play

Press [OSD/DISPLAY] until the unit information screen is displayed

(⇒ page 29).

2 Press [▲, ▼] to select the play menu.



A-B Repeat

3 Press [◀, ▶] to select "A-B Repeat" and

① Press [ENTER] at the starting point (A).

② Press [ENTER] at the finishing point (B).

A-B repeat starts.



## Marking places to play again

RAM DVD-A DVD-V VCD CD WMA MP3 JPEG

You can mark positions so you can return to them easily at a later time.

1 During play

Press [OSD/DISPLAY] until the unit information screen is displayed

(⇒ page 29).

2 Press [▲, ▼] to select the play menu.

e.g. DVD-V



Marker

3 Press [◀, ▶] to select "Marker" and press [ENTER].

RAM only

Then press [▶] to select an asterisk (\*).

4 Press [ENTER] at the point you want to mark.

### To mark another position

Up to 5 points (RAM only: up to 999 points)

1 Press [▶] to select "\*".

2 Press [ENTER] at the point.

### To recall or erase a marker

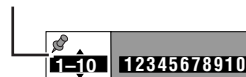
1 Press [◀, ▶] to select a marker.

2 Press [ENTER] to recall or press [CANCEL] to erase.

RAM

### To mark the eleventh point and beyond

1 Press [◀, ▶] to select the marker pin icon.



2 Press [▲, ▼] to select "11-20".

You can select the next group when the current group is full.

### Note

Markers added with this unit clear when you switch the unit to standby, change the source, or open the disc tray.

### To return to the normal play

Press [ENTER] again.

### Note

A-B repeat is canceled when you press [QUICK REPLAY].





**To use the tree screen to find a group**

WMA MP3 JPEG

While the menu is displayed

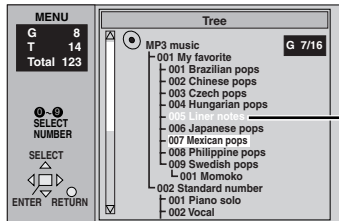
**1**

WMA MP3

Press [▶] while a track is highlighted to display a tree screen.

JPEG

Press [▲, ▼, ◀, ▶] to select "Tree" and press [ENTER].



You cannot select groups that contain non-compatible files.

**2 Press [▲, ▼, ◀, ▶] to select a group and press [ENTER].**

The audio navigation menu/album display for the group appears.

**To return to the menu**

Press [RETURN].

**Note**

WMA

- You cannot play WMA files that are copy protected.
- Noise may occur when playing WMA files.
- WMA files must have the extension ".WMA" or ".wma".

MP3

- This unit is not compatible with ID3 tags.
- If you play an MP3 track that includes still picture data, it will take some time before the music itself starts playing and the elapsed time will not be displayed during this time. Even after the track starts, the correct play time will not be displayed.
- MP3 files must have the extension ".MP3" or ".mp3".

JPEG

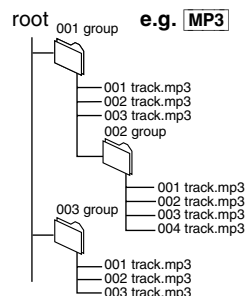
- To view JPEG files on this unit:
  - Take them on a digital camera that meets the DCF (Design rule for Camera File System) standard. Some digital cameras have functions that are not supported by the DCF standard like automatic picture rotation which may render a picture un-viewable.
  - Do not alter the files in any way or save them under a different name.
  - Ensure they have the extension ".JPG", ".jpg", ".JPEG", or ".jpeg".
- This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (i.e. TIFF) or play associated sound.

WMA MP3 JPEG

- Discs must conform to ISO9660 level 1 or 2 (except for extended formats).
- This unit is compatible with multi-session but if there are a lot of sessions it takes more time for play to start. Keep the number of sessions to a minimum to avoid this.

**Naming folders and files**

At the time of recording, prefix folder and file names with 3-digit numbers in the order you want to play them (this may not work at times).

**Playing HighMAT discs**

A menu appears after you insert the disc.

Press [▲, ▼, ◀, ▶] to select then press [ENTER].

When you press [ENTER]:



Menu: Takes you to the next menu which shows play lists or another menu



Play list: Play starts

**To return to the menu screen**

Press [TOP MENU].

**To return to the menu above the current one**

Press [RETURN].

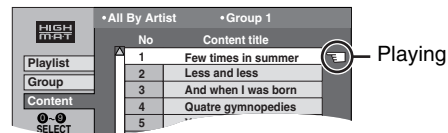
**To change the menu background**

Press [OSD/DISPLAY].

The background changes to the one recorded on the disc.

**■ Selecting from the lists**

While playing

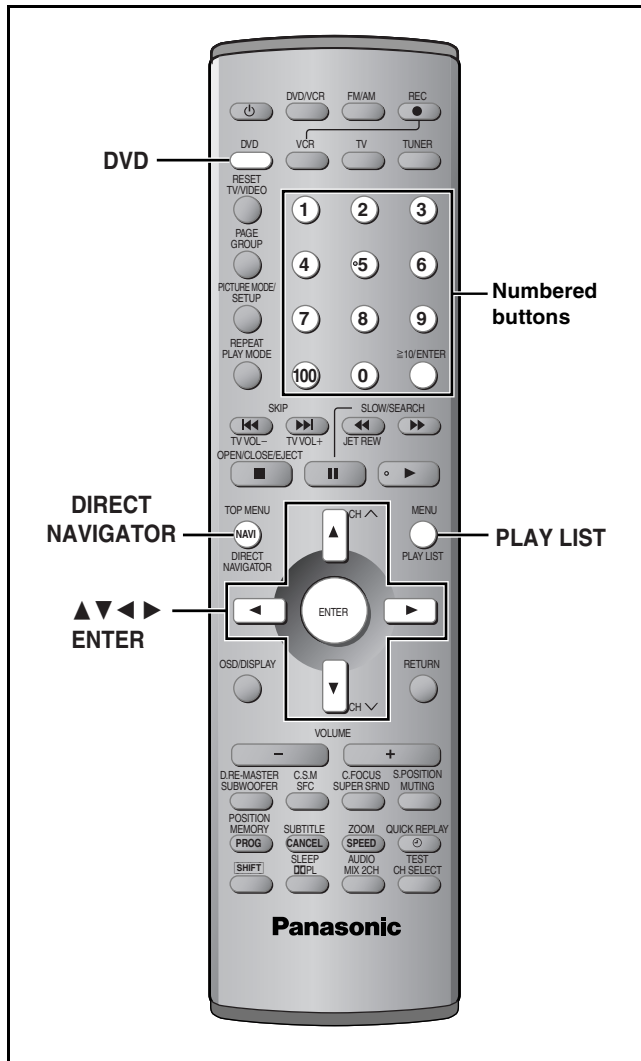
**1 Press [MENU].****2 Press [◀] then [▲, ▼] to switch between the play list, group and content lists.****3 Press [▶] then [▲, ▼] to select an item and press [ENTER].****To exit the list screen**

Press [MENU].



HighMAT and the HighMAT logo are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.



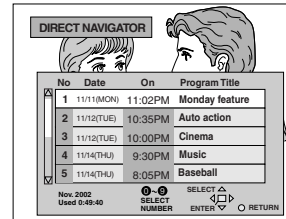


## RAM

### Selecting a program to play —DIRECT NAVIGATOR

Use the program list to find programs to play.

#### 1 Press [DIRECT NAVIGATOR].



- Titles appear only if you have entered them.
- You cannot change program and disc titles.

#### 2 Press [▲, ▼] to select the program.

The selected program plays in the background.

- You can select programs with the numbered buttons.

**To select a 2-digit number**

e.g. 23: [≥10] → [2] → [3]

#### 3 Press [ENTER].

The program being played in the background continues.

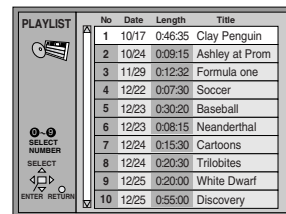
#### To clear the program list

Press [DIRECT NAVIGATOR].

### Playing a play list

You can play a group of scenes, a play list, created on other equipment such as a DVD video recorder.

#### 1 Press [PLAY LIST].



#### 2 Press [▲, ▼] to select the play list.

- You can select play lists with the numbered buttons.

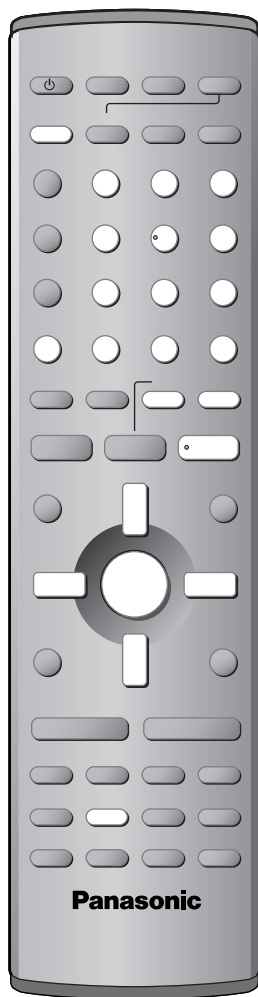
**To select a 2-digit number**

e.g. 23: [≥10] → [2] → [3]

#### 3 Press [ENTER] to start play.

#### To clear the play list screen

Press [PLAY LIST].



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DVD-A DVD-V VCD CD WMA MP3

## Common procedures for All group, Random and Program play

While stopped

Press [PLAY MODE].

Each time you press the button:

All group (DVD-A) → Program → Random

↑ Off (Normal play) ↓

DVD-A

If you select bonus groups, you will have to enter a password (→ page 20).

Note

Disable HighMAT disc play to use random and program play.

- 1 In the SETUP menu, set "HighMAT" to "Disable" (→ page 31).
- 2 Reinsert the disc and perform the necessary operations.

Note

- The program is not displayed when the disc tray is selected.
- DVD-V WMA MP3

Times are not displayed while program

1

DVD-A DVD-V

Press the numbered button for a group or a title.

DVD-A

- You can select more than one group. To enter all groups, select "All" using [◀, ▶] and press [ENTER].
- To deselect a group, press the numbered buttons corresponding to the group you want to clear.

2 Press [▶] (play).

All group play Numbered buttons Random play Random Playback Press PLAY to

DVD-A

The unit plays tracks in all the groups on a disc.

Press [▶] (play).



“—” or “——” is displayed instead of the language number in circumstances such as when no language is recorded on the disc.



## Variable Zoom function

**RAM** **DVD-A** (Motion picture parts only) **DVD-V** **VCD**

Change the zoom ratio so the picture expands to the optimum size to fill the screen.

### Preparation

Change the setting "TV Aspect" to suit your television (➡ page 31).

### During play

**Press [ZOOM] to select the preset aspect ratio.**



The zoom ratio changes each time you press the button.

Zoom - 4:3 Standard

The popup shows the video format suited to the ratio.

Each time you press the button:

**4:3 Standard** → **European Vista** → **16:9 Standard**

↑                      ↓  
**Cinemascope2** ← **Cinemascope1** ← **American Vista**

- Refer to the disc's instructions and "Screen size" below for the aspect ratio of the picture.

### To restore the original ratio

Press [ZOOM] until the ratio returns to 1.00.

- The ratio also returns to 1.00 when you open the disc tray, change the source or switch the unit to standby.
- The ratio may return to 1.00 when a menu is displayed.

### Making fine adjustments to the zoom ratio

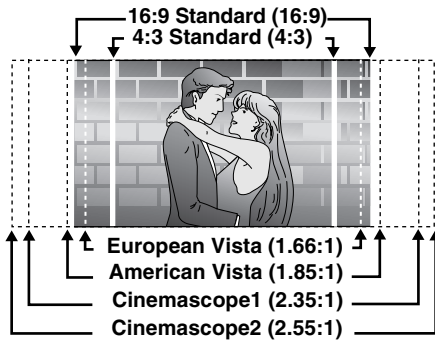
While the ZOOM icon is displayed

Press [▲, ▼].

The ratio changes in 0.01 units between 1.00 and 1.60 and in 0.02 units between 1.60 and 2.00.

### ■ Screen size

Movies are made using a variety of screen sizes.



## Double re-master—Enjoying more natural sound

**RAM** **DVD-A** **DVD-V** **CD**

**Discs recorded with 2-channel LPCM at 44.1 kHz or 48 kHz**

This feature gives you a more natural sound by adding the higher frequency signals not recorded on the disc.

**WMA** **MP3**

**Discs recorded at 44.1 kHz or 48 kHz**

This feature reproduces the frequencies lost during recording to give you a sound closer to the original.

### During play

**Press [SHIFT]+[D.RE-MASTER].**



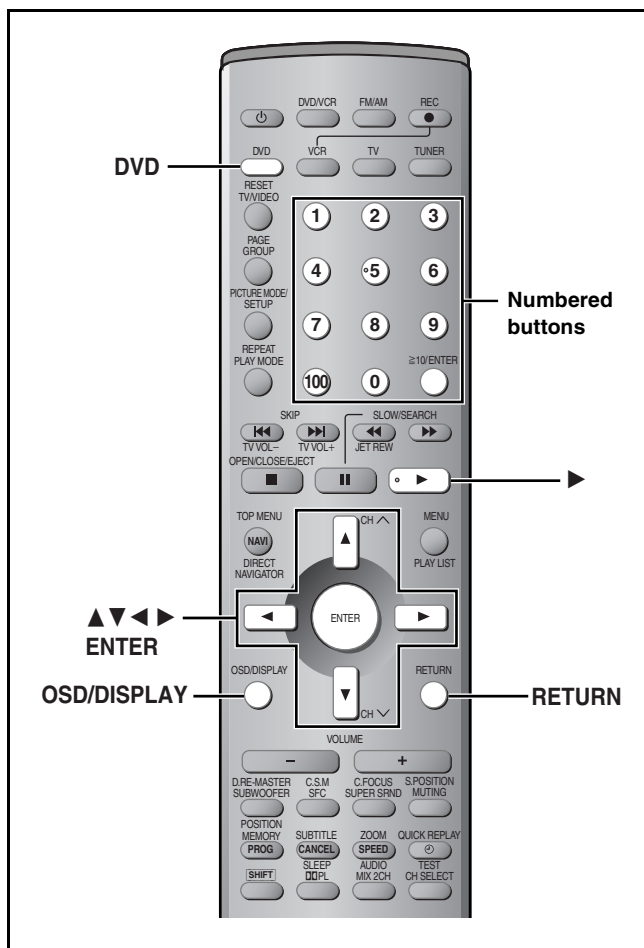
Output sampling frequency

Each time you press the button:

Setting	<b>RAM</b> <b>DVD-A</b> <b>DVD-V</b> <b>CD</b> Type of music	<b>WMA</b> <b>MP3</b> Effect level
1	High tempo (e.g., pops and rock)	Light
2	Various tempos (e.g., jazz)	Medium
3	Low tempo (e.g., classical)	Strong
OFF	Off	Off



DVD



RAM DVD-A DVD-V VCD CD WMA MP3 JPEG

On-Screen Menu Icons contain information about the disc or unit. These menus allow you to perform operations by changing this information.

## Common procedures

### 1 Press [OSD/DISPLAY].

Each time you press the button:

- Disc information (⇒ page 29)
- ↓
- Progress indicator (⇒ right)
- ↓
- Unit information (⇒ page 29)
- ↓
- Original display

### 2 Unit information only

While the leftmost icon is highlighted

**Press [▲, ▼] to select the menu.**

Each time you press the button:

- Play menu
- ↓ ↑
- Display menu
- ↓ ↑
- Audio menu
- ↓ ↑
- Picture menu

### 3 Press [◀, ▶] to select the item.

### 4 Press [▲, ▼] to select the setting.

- Change items with “▲” or “▼” above and below with [▲, ▼] (press [ENTER] if the setting doesn't change).
- Change numbered items with the numbered buttons and press [ENTER].
- Read the following explanations for other items.
- Depending on the condition of the unit (playing, stopped, etc.) and the type of software, there are some items that you cannot select or change.

#### To clear the menus

Press [RETURN] until the menus disappear.

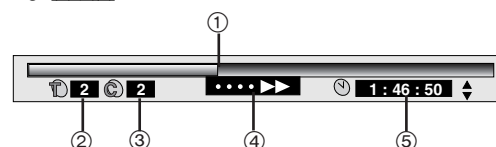
#### To change the position of the icons

- 1 Press [◀, ▶] to select the rightmost icon.
- 2 Press [▲, ▼] to move the icons. (There are 5 positions.)

## Progress indicator

Indicates how far you have played through an item.

e.g. DVD-V



- ① Current position RAM DVD-A DVD-V VCD CD WMA MP3
- ② PG: Program number RAM  
PL: Play list number RAM  
T: Title number DVD-V  
Track number VCD CD
- ③ G: Group number DVD-A WMA MP3 JPEG  
T: Track number in group DVD-A WMA MP3  
C: Chapter number DVD-V  
P: Picture number JPEG
- ④ Condition – play, pause, or slow/search  
RAM DVD-A DVD-V VCD CD WMA MP3  
Play speed (⇒ below)
- ⑤ Changing the time display RAM DVD-A DVD-V VCD CD  
Press [▲, ▼] to show the elapsed play time or remaining time for the program, play list, track or title (or chapter during program and random play).  
Elapsed play time WMA MP3  
(display only, cannot be changed)

#### Changing play speed

DVD-A (Motion picture part)

DVD-V (Dolby Digital only)

You can slow down or speed up play.

#### During play

**Press [◀] (slower) or [▶] (faster).**

There are five speeds:

×0.8 ↔ ×0.9 ↔ ×1.0 (normal speed) ↔ ×1.2 ↔ ×1.4

After you change the speed, output is in stereo.

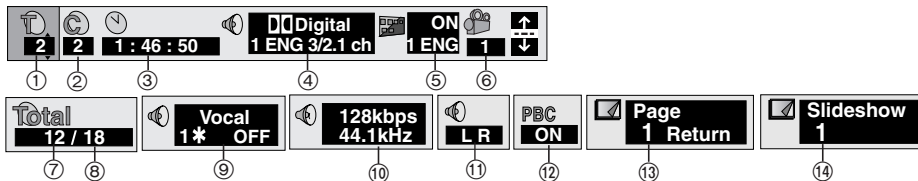
Sound is stereo as long as “×1.0” is orange.

To return to normal play (surround sound), press [▶] (play).

Normal play is also restored when you return the speed to ×1.0 and clear the progress indicator.

Unless otherwise indicated, select items with [◀, ▶] and change with [▲, ▼].

## Disc information



①	<b>PG:</b> Program number <b>RAM</b> <b>PL:</b> Play list number <b>RAM</b> <b>G:</b> Group number <b>DVD-A</b> <b>WMA</b> <b>MP3</b> <b>JPEG</b> <b>T:</b> Title number <b>DVD-V</b> Track number <b>VCD</b> <b>CD</b>	[▲, ▼] ↓ [ENTER]
②	<b>T:</b> Track number in group <b>DVD-A</b> <b>WMA</b> <b>MP3</b> <b>C:</b> Chapter number <b>DVD-V</b> <b>P:</b> Picture number in group <b>JPEG</b>	[ENTER]
③	<b>Time</b> <b>RAM</b> <b>DVD-A</b> <b>DVD-V</b> Select a position to start play by specifying a time. <b>Changing the time display</b> <b>RAM</b> <b>DVD-A</b> <b>DVD-V</b> <b>VCD</b> <b>CD</b> <b>WMA</b> <b>MP3</b> (Display only) ↳ Elapsed play time for the program, play list, title or track ↳ Remaining time for the group ( <b>DVD-A</b> ) or disc ( <b>VCD</b> <b>CD</b> ) ↳ Remaining time for the program, play list, title or track	Numbered buttons ↓ [ENTER]
④	<b>Soundtrack</b> <b>DVD-A</b> <b>DVD-V</b> (⇒ page 26)	
⑤	<b>Subtitle language</b> <b>DVD-A</b> <b>DVD-V</b> (⇒ page 26) <b>Subtitles on/off</b> <b>RAM</b> <b>DVD-A</b> <b>DVD-V</b> <b>Track information on/off</b> <b>WMA</b> <b>MP3</b> <b>CD</b> (CD text only) <b>Picture information</b> <b>JPEG</b> Full: Group title, picture title, picture size, file size, date of shooting, and camera model used*. Date: Date of shooting only. OFF: No display. * Actual displays depend on the camera and data.	
⑥	<b>Angle number</b> <b>DVD-A</b> <b>DVD-V</b> <b>Picture rotation</b> <b>JPEG</b> 0↔90↔180↔270	

⑦	<b>Track/picture number in disc</b> <b>WMA</b> <b>MP3</b> <b>JPEG</b>	[▲, ▼] ↓ [ENTER]
⑧	<b>Total number of tracks/pictures on disc</b> <b>WMA</b> <b>MP3</b> <b>JPEG</b>	Display only
⑨	<b>Karaoke vocal on/off</b> <b>DVD-V</b> (Karaoke DVD only) If a DVD title is a duet, select V1 or V2 to duet with the unit.	
⑩	<b>Current bitrate (kbps)</b> <b>Current sampling frequency (kHz)</b> <b>WMA</b> <b>MP3</b>	Display only
⑪	<b>Audio mode</b> <b>RAM</b> <b>VCD</b> LR→L→R	
⑫	<b>Menu play</b> <b>VCD</b> (with playback control only)	Display only
⑬	<b>Still picture number</b> <b>DVD-A</b> • To return to page 1 [◀, ▶]→Select "Return"→[ENTER]	
⑭	<b>Slideshow</b> <b>DVD-A</b> Picture number	Display only
⑭	<b>Slideshow setting</b> <b>JPEG</b> ON↔OFF <b>Slideshow timing</b> <b>JPEG</b> 0 – 30 sec	

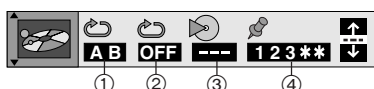


### Audio/Subtitle language

ENG: English	SVE: Swedish	CHI: Chinese
FRA: French	NOR: Norwegian	KOR: Korean
DEU: German	DAN: Danish	MAL: Malay
ITA: Italian	POR: Portuguese	VIE: Vietnamese
ESP: Spanish	RUS: Russian	THA: Thai
NLD: Dutch	JPN: Japanese	*: Others

## Unit information

### Play menu



①	<b>A-B repeat</b> (⇒ page 21) <b>RAM</b> <b>DVD-A</b> <b>DVD-V</b> <b>VCD</b> <b>CD</b> <b>WMA</b> <b>MP3</b>	[ENTER]
②	<b>Repeat mode</b> (⇒ page 21) <b>RAM</b> <b>DVD-A</b> <b>DVD-V</b> <b>VCD</b> <b>CD</b> <b>WMA</b> <b>MP3</b> <b>JPEG</b>	
③	<b>Play mode</b> (⇒ page 25) <b>DVD-A</b> <b>DVD-V</b> <b>VCD</b> <b>CD</b> <b>WMA</b> <b>MP3</b> ---: Normal play PGM: Program play RND: Random play ALL: All group play ( <b>DVD-A</b> )	Display only
④	<b>Marker</b> <b>RAM</b> <b>DVD-A</b> <b>DVD-V</b> <b>VCD</b> <b>CD</b> <b>WMA</b> <b>MP3</b> <b>JPEG</b>	⇒ page 21

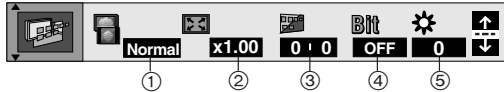
### Audio menu



①	<b>Double re-master</b> (⇒ page 27) <b>RAM</b> <b>DVD-A</b> <b>DVD-V</b> <b>CD</b> <b>WMA</b> <b>MP3</b>	
②	<b>Dialogue Enhancer on/off</b> <b>DVD-V</b> (Discs where the dialogue is recorded in the center channel) This makes the dialogue in movies easier to hear.	

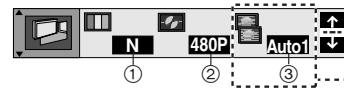
## Unit information

### Display menu



①	<b>4:3 Aspect</b> <b>RAM DVD-A DVD-V VCD JPEG</b> Select how to show images made for 4:3 aspect screens on a 16:9 aspect television. <ul style="list-style-type: none"> <li>• <b>Normal:</b> Laterally stretches images made for a 4:3 screen.</li> <li>• <b>Auto:</b> Expands suitable 4:3 letterbox images to fill more of the screen. Other images appear in full in the center of the screen.</li> <li>• <b>Shrink:</b> Images appear in the center of the screen.</li> <li>• <b>Zoom:</b> Expands all images to fill the screen.</li> </ul> If your television has a similar feature, use it instead for a better effect.
②	<b>Zoom (⇒ page 27) RAM DVD-A DVD-V VCD</b> To select preset aspect ratio Press [ENTER] and then [◀, ▶] to select. Press [ENTER] to finish.
③	<b>Making fine adjustments to the zoom ratio</b> [▲, ▼]
④	<b>Subtitle position/Subtitle brightness (⇒ page 26) DVD-A DVD-V</b> <b>Bitrate display on/off</b> <b>RAM DVD-A</b> (Motion picture parts only) <b>DVD-V VCD</b> During play: shows the average bitrate (approximate values) of the video being played While paused: shows the data volume of the frame and type of picture (⇒ page 59, Glossary—I/P/B) 
⑤	<b>OSD brightness (–3 to +3)</b> Adjust the brightness of the on-screen displays.

### Picture menu

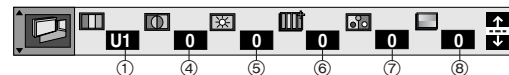


①	<b>Picture mode RAM DVD-A DVD-V VCD JPEG</b> <ul style="list-style-type: none"> <li>• <b>N:</b> Normal mode</li> <li>• <b>S:</b> Soft mode (Soft picture with fewer video artifacts)</li> <li>• <b>F:</b> Fine mode (Details are sharper)</li> <li>• <b>C1:</b> Mellows images and enhances detail in dark scenes</li> <li>• <b>C2:</b> Sharpens images and enhances detail in dark scenes</li> <li>• <b>U1/U2:</b> User mode (⇒ below)</li> </ul>
②	<b>Video output mode RAM DVD-A DVD-V VCD JPEG</b> <ul style="list-style-type: none"> <li>• <b>480I:</b> Interlace video</li> <li>• <b>480P:</b> Progressive video</li> </ul>
③	<b>Transfer mode RAM DVD-A DVD-V VCD</b> Select the method of conversion for progressive output to suit the type of material being played. <ul style="list-style-type: none"> <li>• <b>Auto 1 (normal):</b> for viewing film material</li> <li>• <b>Auto 2:</b> for viewing film material (the same as Auto 1, but able to convert 30-frame-per-second progressive video)</li> <li>• <b>Video:</b> for video material</li> </ul>

### To change the user mode

- 1 Select User mode and press [▶] to highlight the number.
- 2 Press [▲, ▼] to select “1” or “2”.

### U1



④	<b>Contrast (–7 to +7)</b> Increases the contrast between light and dark parts of the picture.
⑤	<b>Brightness (0 to +15)</b> Brightens the picture.
⑥	<b>Sharpness (–7 to +7)</b> Adjusts the sharpness of the edges of the horizontal lines.
⑦	<b>Color (–7 to +7)</b> Adjusts the shade of the picture's color.
⑧	<b>Gamma (0 to +5)</b> Adjusts the brightness of dark parts of the picture.

### U2








When progressive output is on  
①–③ (⇒ above)

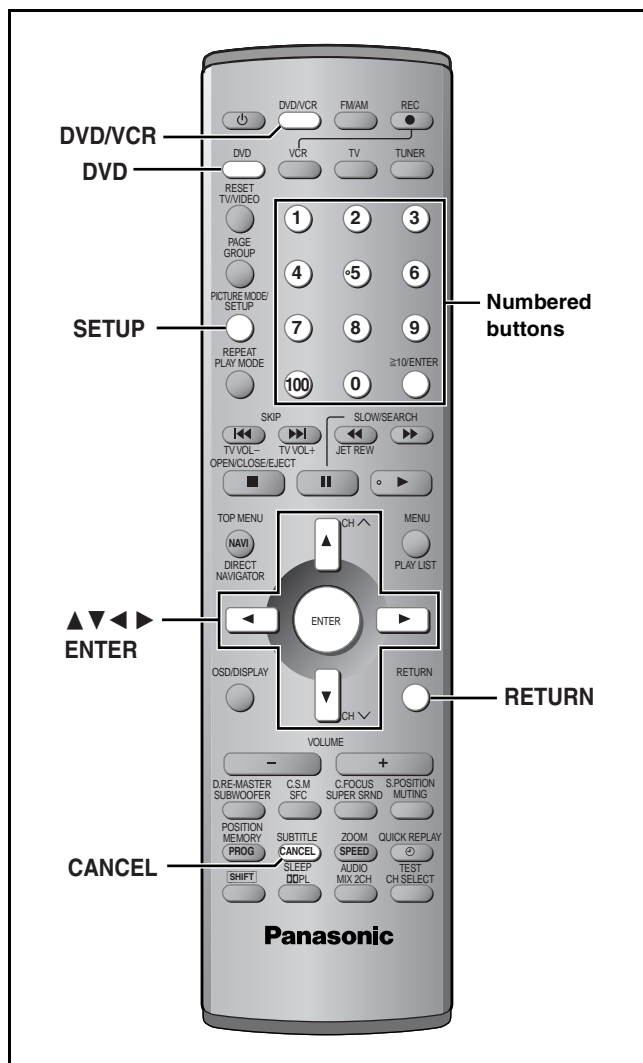


This chart shows the settings for this unit. Change the settings to suit your preferences and to suit the unit to the environment in which it is being used. These settings are retained in memory until they are changed, even if the unit is turned off. See page 32 for details on menu operation.

• Underlined items are the factory preset.

Menus	Items	Options
<b>Disc</b> 	<b>Audio</b> Choose the preferred audio language.	<u>English</u> French   Spanish   Original   Other ***** Original:      The original language of each disc will be selected. Other *****: Input a code number with the numbered buttons (⇒ page 32).
	<b>Subtitle</b> Choose the preferred subtitle language.	<u>Automatic</u> English   French   Spanish   Other ***** Automatic: If the language selected for "Audio" is not available, subtitles of that language will automatically appear if available on that disc.
	<b>Menus</b> Choose the preferred language for disc menus.	<u>English</u> French   Spanish   Other *****
	<b>Ratings</b> (⇒ page 33) Set a ratings level to limit DVD-Video play. • The password screen is shown if you choose levels 0 to 7 or if you choose "Ratings" when levels 0 to 7 have been selected. • Select "Level 0" to prevent play of discs that do not have ratings levels recorded on them.	<b>Setting ratings (When level 8 is selected)</b> <u>8 No Limit</u> : All DVD-Video can be played. 1 to 7:      Prohibits play of DVD-Video with corresponding ratings recorded on them. 0 Lock All: Prohibits play of all DVD-Video. ----- <b>Changing ratings (When level 0–7 is selected)</b> Unlock Player      Change Level Change Password      Temporary Unlock
<b>Video</b> 	<b>TV Aspect</b> (⇒ page 17) Choose the setting to suit your television and preference.	<u>4:3 Pan&amp;Scan</u> 4:3 Letterbox      16:9
	<b>TV Type</b> (⇒ page 17) Select to suit the type of television.	<u>Standard (Direct View TV)</u> CRT Projector      LCD TV/Projector Projection TV      Plasma TV
	<b>Still Mode</b> Specify the type of picture shown when paused.	<u>Automatic</u> Field      Frame
	<b>Black Level Control</b> Change the black level of the picture if you connected a television through the COMPONENT VIDEO OUT terminals.	<u>Lighter</u> : When connected to a TV through the VIDEO OUT or S-VIDEO OUT terminal. Darker: When connected to a TV through the COMPONENT VIDEO OUT (Y/P <sub>B</sub> /P <sub>R</sub> ) terminals.
<b>Audio</b> 	<b>Speaker Setting</b> (⇒ page 33) Set the delay time for your center and surround speakers.	Multi-channel Center:      0/1.3/2.6/3.9/5.3 ms Surround (L/R):      0/5.3/10.6/15.9 ms
	<b>Dynamic Range Compression</b> (Dolby Digital only) Change the dynamic range for late night viewing.	<u>Off</u> On: For clear dialog when listening at low volume.
	<b>Audio during Search</b> Choose whether to have sound during search.	<u>On</u> Off This feature doesn't work for some discs.
<b>Display</b> 	<b>Menu Language</b> Choose the preferred language for these menus and the on-screen messages.	<u>English</u> Français      Español
	<b>On-Screen Messages</b> Choose whether to show on-screen messages or not.	<u>On</u> Off
<b>Others</b> 	<b>HighMAT</b> Play HighMAT discs as HighMAT discs, or as regular WMA/MP3/JPEG discs. (Reload the disc for the setting to be effective.)	<u>Enable</u> : Play HighMAT discs as HighMAT discs. Disable: Play HighMAT discs as regular WMA/MP3/JPEG discs.
	<b>Mixed Disc—Audio &amp; Stills</b> Select the type of file played on discs containing both JPEG and WMA/MP3. (Reload the disc for the setting to be effective.)	<u>Audio (MP3/WMA)</u> Stills (JPEG)
	<b>DVD-Video Mode</b> Select how to play pictures contained on some DVD-Audio. The setting returns to "Off" when you remove the disc, turn the unit off or change the source.	<u>Off</u> : DVD-Audio are played as DVD-Audio. On: You can play DVD-Video content on DVD-Audio.
	<b>QUICK SETUP</b> (⇒ page 17) Answer questions to make basic settings.	Yes (Menu language, Audio language, Subtitle language, TV type, TV aspect) <u>No</u>





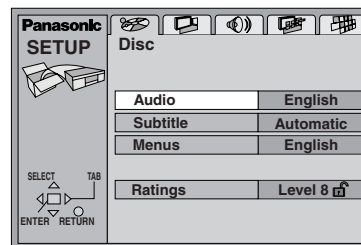
## Common procedures

See page 31 for menu and option details.

### Preparation

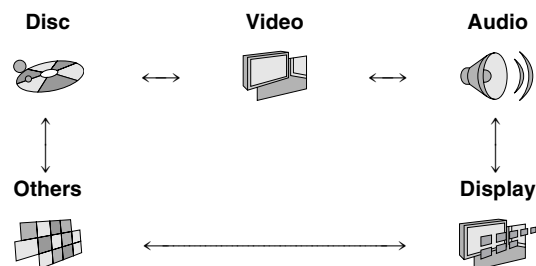
- Press [DVD] to put the remote control in DVD mode.
- Press [DVD/VCR] to select "DVD" as the source.

## 1 Press [SETUP] to show the menus.



## 2 Press [◀, ▶] to select the menu's tab.

The screen changes to display the menu.



## 3 Press [▲, ▼] to select the item you want to change and press [ENTER].

## 4 Press [▲, ▼, ◀, ▶] to select the option and press [ENTER].

The screen now shows the menu again.

### To return to the previous screen

Press [RETURN].

### When you are finished

Press [SETUP].

## Language code list

Abkhazian: 6566	Chinese: 9072	Hausa: 7265	Lithuanian: 7684	Romanian: 8279	Telugu: 8469
Afar: 6565	Corsican: 6779	Hebrew: 7387	Macedonian: 7775	Russian: 8285	Thai: 8472
Afrikaans: 6570	Croatian: 7282	Hindi: 7273	Malagasy: 7771	Samoan: 8377	Tibetan: 6679
Albanian: 8381	Czech: 6783	Hungarian: 7285	Malay: 7783	Sanskrit: 8365	Tigrinya: 8473
Ameharic: 6577	Danish: 6865	Icelandic: 7383	Malayalam: 7776	Scots Gaelic: 7168	Tonga: 8479
Arabic: 6582	Dutch: 7876	Indonesian: 7378	Maltese: 7784	Serbian: 8382	Turkish: 8482
Armenian: 7289	English: 6978	Interlingua: 7365	Maori: 7773	Serbo-Croatian: 8372	Turkmen: 8475
Assamese: 6583	Esperanto: 6979	Irish: 7165	Marathi: 7782	Shona: 8378	Twi: 8487
Aymara: 6588	Estonian: 6984	Italian: 7384	Moldavian: 7779	Sindhi: 8368	Ukrainian: 8575
Azerbaijani: 6590	Faroese: 7079	Japanese: 7465	Mongolian: 7778	Singhalese: 8373	Urdu: 8582
Bashkir: 6665	Fiji: 7074	Javanese: 7487	Nauru: 7865	Slovak: 8375	Uzbek: 8590
Basque: 6985	Finnish: 7073	Kannada: 7578	Nepali: 7869	Slovenian: 8376	Vietnamese: 8673
Bengali; Bangla: 6678	French: 7082	Kashmiri: 7583	Norwegian: 7879	Somali: 8379	Volapük: 8679
Bhutani: 6890	Frisian: 7089	Kazakh: 7575	Oriya: 7982	Spanish: 6983	Welsh: 8678
Bihari: 6672	Galician: 7176	Kirghiz: 7589	Pashto, Pushto: 8083	Sundanese: 8385	Wolof: 8779
Breton: 6682	Georgian: 7565	Korean: 7579	Persian: 7065	Swahili: 8387	Xhosa: 8872
Bulgarian: 6671	German: 6869	Kurdish: 7585	Polish: 8076	Swedish: 8386	Yiddish: 7473
Burmese: 7789	Greek: 6976	Laotian: 7679	Portuguese: 8084	Tagalog: 8476	Yoruba: 8979
Byelorussian: 6669	Greenlandic: 7576	Latin: 7665	Punjabi: 8065	Tajik: 8471	Zulu: 9085
Cambodian: 7577	Guarani: 7178	Latvian, Lettish: 7686	Quechua: 8185	Tamil: 8465	
Catalan: 6765	Gujarati: 7185	Lingala: 7678	Rhaeto-Romance: 8277	Tatar: 8484	



## Entering a password (Ratings)

### DVD-V

The password screen is shown when you select levels 0 to 7.

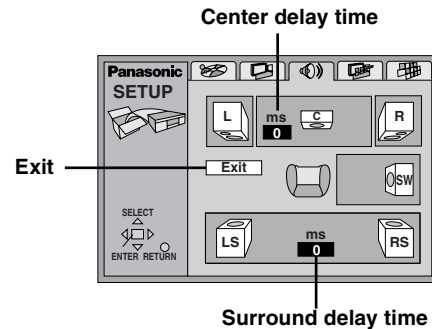
- Input a 4-digit password with the numbered buttons and press [ENTER].
  - If you enter a wrong number, press [CANCEL] to erase it before you press [ENTER].
  - The lock symbol appears closed to show the rating is locked.
  - Do not forget your password.**
- Press [ENTER] to confirm the 4 digits.

Now, when you insert a DVD-Video that exceeds the ratings limit you set, a message appears on the television. Follow the on-screen instructions.

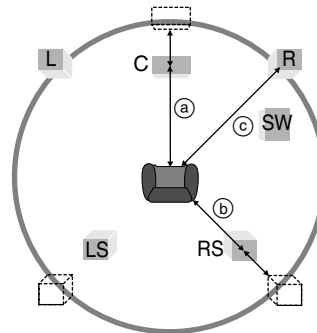
## Changing the delay time (Speaker Setting)

(Effective when playing multi-channel discs)

For optimum listening with 5.1-channel sound, all the speakers, except for the subwoofer, should be the same distance from the seating position. If you have to place the center or surround speakers closer to the seating position, adjust the delay time to make up for the difference.



- Press [▲, ▼, ◀, ▶] to select the delay time box and press [ENTER].
- Press [▲, ▼] to adjust the delay time and press [ENTER].



### Values

If distance (a) or (b) is greater than or equal to distance (c), set to "0".

If distance (a) or (b) is less than distance (c), set as follows.

#### ① Center speaker

Difference	Setting
Approx. 50 cm (1½ feet)	1.3 ms
Approx. 100 cm (3 feet)	2.6 ms
Approx. 150 cm (5 feet)	3.9 ms
Approx. 200 cm (6 feet)	5.3 ms

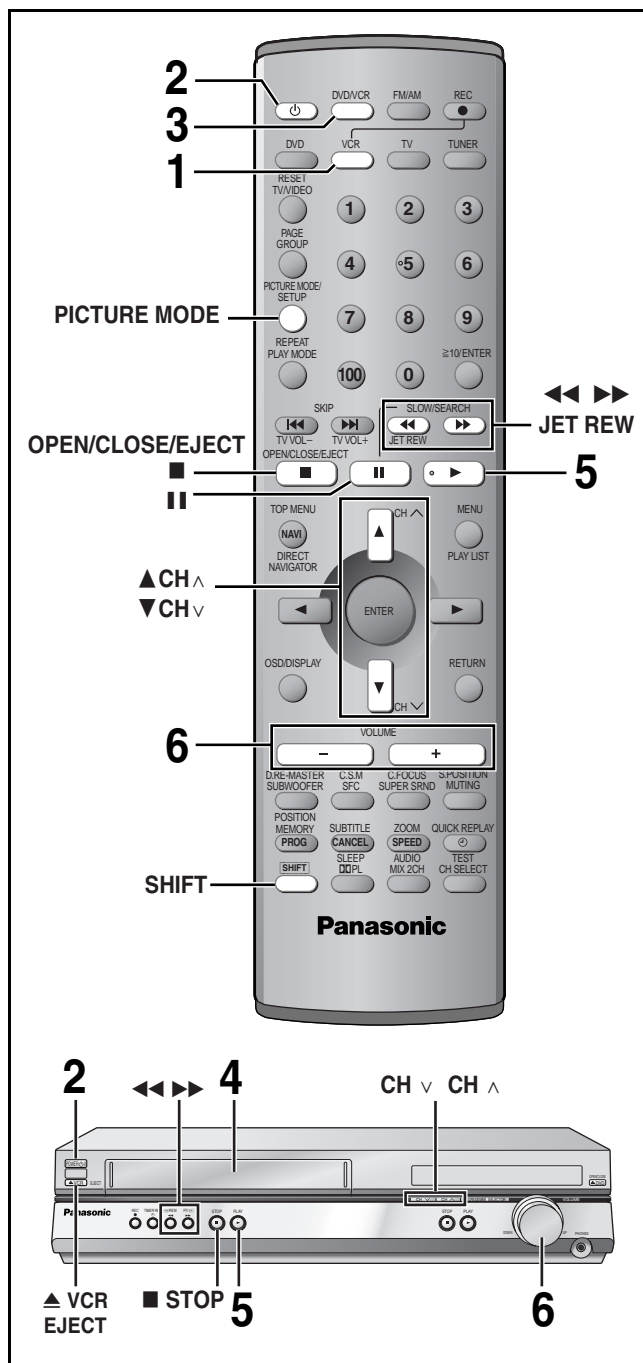
#### ② Surround speakers

Difference	Setting
Approx. 200 cm (6 feet)	5.3 ms
Approx. 400 cm (12 feet)	10.6 ms
Approx. 600 cm (18 feet)	15.9 ms

### When you are finished

Press [▲, ▼, ◀, ▶] to select "Exit" and press [ENTER].





## Preparation

Turn on the television and select the video input for the VCR.

**1 Press [VCR] to put the remote control in VCR mode.**

**2 Press [POWER] to turn on the unit.**

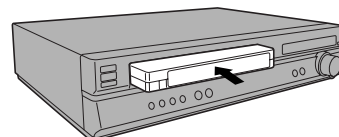
**3 Press [DVD/VCR] to select "VCR" as the source.**

The following indicator appears when you select VCR.



**4 Insert a tape.**

Play starts automatically if you insert a prerecorded tape or one that has had its tab removed.



**5 Press [PLAY] (play).**

**6 Adjust the volume.**

Stop	Press [■].
<b>Fast-forward and rewind</b>	While stopped, press [◀◀] (backward) or [▶▶] (forward).
<b>Jet rewind</b>	While stopped, press [SHIFT]+[◀◀ JET REW].
<b>Cue and review</b>	During play, press [◀◀] (backward) or [▶▶] (forward). Or Press and hold during play. Play restarts when you release the button.
<b>Jet search</b>	During play, press [◀◀] (backward) or [▶▶] (forward) twice.
<b>Pause</b>	Press [⏸]. Press [⏸] or [▶] (play) to restart.
<b>Slow</b>	Press and hold [⏸] for about two seconds.
<b>Eject</b>	Press [▲ VCR EJECT] on the main unit or [SHIFT]+[OPEN/CLOSE/EJECT] on the remote control.

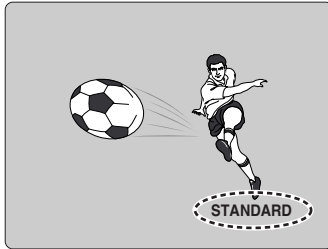
## Note

- Press [▶] (play) to restart play.
- You can fast-forward and rewind while using another source.
- The tape counter does not appear during Jet rewind.
- The tape moves at high speed during fast-forward, rewind, and jet rewind so the unit will make a noise. Also, it takes some time for the tape to stop after you press [■].
- There is no sound during cue, review, jet search, pause, and slow.
- Cue, review, jet search, and slow stop after 10 minutes and pause after 5 minutes.
- The picture during cue, review, and jet search may be disrupted or otherwise affected on some televisions. During jet search at 35 times normal speed through EP or VP recordings, the picture may scroll vertically with some televisions. Change to 27-times normal speed if this occurs (⇒ page 44).
- You can eject tapes when the unit is in standby mode. It switches back to standby once it ejects the tape.
- You cannot eject tapes when the VCR is in timer recording standby or actually recording.

## Picture mode—Changing picture quality

You can change the quality of the picture to suit the material you are playing.

Press [PICTURE MODE].



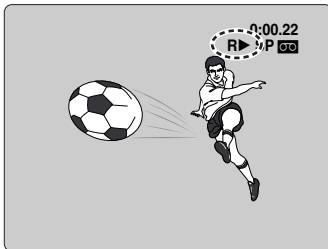
Each time you press the button:

- **STANDARD:** for recordings of television program (Factory preset)
- ↓
- DYNAMIC:** Clear, vivid pictures for scenery and sports
- ↓
- SOFT:** for prerecorded tapes

## Repeat play—play a program repeatedly

Press and hold [▶] (play) for about five seconds.

“R▶” appears on the television.



At the end of the program, the tape rewinds to the beginning of the program and plays it again. (It only works if there is a five-second blank at the end of the program.) This repeats until you cancel it.

### To cancel

Press [▶] (play).

- It also cancels if you stop, pause, cue, or review.

## Manual tracking

This unit has an automatic digital tracking control feature that usually makes tracking adjustments for you, but you may need to do it manually, such as if noise appears on a tape recorded on other equipment.

During play

Press [▲ CH ▲] or [▼ CH ▼].

Repeat until the noise disappears.

### To return to automatic digital tracking control

Press [▲ CH ▲] and [▼ CH ▼] at the same time.

### To remove the noise from a paused picture

Start slow play, then adjust the tracking.

### Note

This may not be effective on some tapes.

## Vertical locking adjustment

Adjust the vertical to stop the picture jiggling while paused.

While paused

Press [▲ CH ▲] or [▼ CH ▼].

Repeat until the jiggling stops.

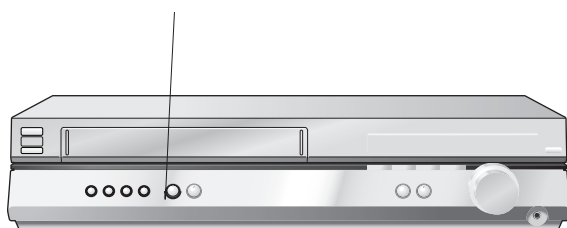
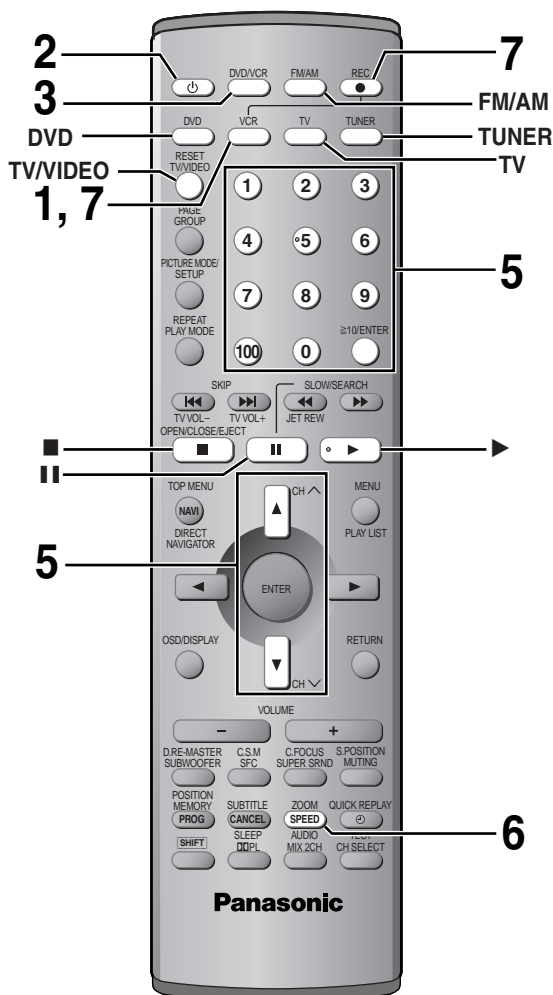
### To return to the previous condition

Press [▲ CH ▲] and [▼ CH ▼] at the same time.

### Note

This may not work with some televisions. Try adjusting the vertical on the television itself.





## ■ Tape speeds

There are three tape speeds.

**SP:** You can record the length shown on the tape.

**EP:** Three times the length of SP mode.

**VP:** Five times the length of SP mode.

- You cannot play tapes recorded with VP mode on other equipment.
- It takes more time for automatic tracking to work when playing tapes recorded with VP mode, and it may not work at all with some tapes. Do tracking manually if this is the case (⇒ page 35).
- This unit can play tapes recorded with LP mode on other equipment ("LP" lights on the display).

## Preparation

Turn on the television and select the video input for the VCR.

- 1 Press [VCR] to put the remote control in VCR mode.**
- 2 Press [⏻] to turn on the unit.**
- 3 Press [DVD/VCR] to select "VCR" as the source.**
- 4 Insert the tape you want to record to.**  
Ensure its tab is in place (⇒ page 5).
- 5 Select the channel with the numbered buttons or [▲ CH▲], [▼ CH▼].**  
• To select with the numbered buttons:  
e.g. channel 2: [0] ⇒ [2]  
channel 23: [2] ⇒ [3]  
channel 123: [100] ⇒ [2] ⇒ [3]
- 6 Press [SPEED] to select the tape speed.**  
Each time you press the button:  
SP → EP → VP  
↑
- 7 While pressing [VCR], press [● REC] to start recording.**  
"REC" lights on the unit's display.

## To stop recording

Press [■].

## To pause recording

Press [⏸].

Press it again or while pressing [VCR], press [● REC] to continue recording.

## ■ To specify a time to stop recording (⇒ page 48, The sleep timer)

### Note

- You cannot change channels while recording. You can change channels while paused.
- The unit will automatically return to the stop mode after a pause of 5 minutes while recording.
- Even if the tape you use is labeled "S-VHS", the recordings you make do not use this system.
- You cannot record from the disc section to the VCR.

## Using another source while recording

You can watch and listen to other content when the unit is in timer recording standby or during VCR recording.

### ■ Television (⇒ page 16)

- 1 During recording  
Press [TV] to put the remote control in TV mode.
- 2 Press [TV/VIDEO] then select the channel with the numbered buttons or [▲ CH▲], [▼ CH▼].

### ■ DVD (⇒ page 18)

- 1 During recording  
Press [DVD] to put the remote control in DVD mode.
- 2 Press [DVD/VCR] to select "DVD".
- 3 Insert a disc and start play.

### ■ Radio (⇒ page 46)

- 1 During recording  
Press [TUNER] to put the remote control in TUNER mode.
- 2 Press [FM/AM] to select the radio band.
- 3 Select the radio channel with the numbered buttons or [▲ CH▲], [▼ CH▼].

#### Note

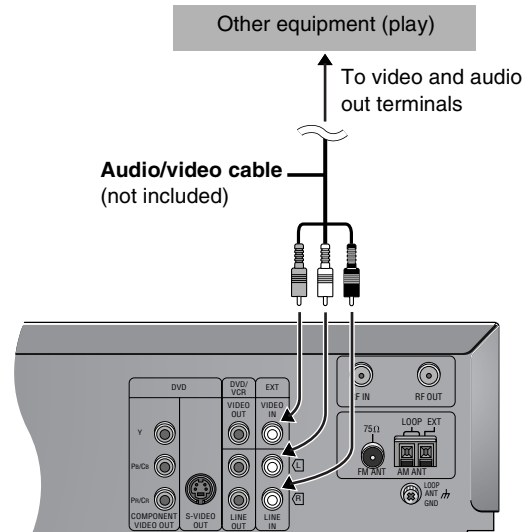
When you want to operate the VCR section again, be sure to press [VCR] to put the remote control in VCR mode.

## Recording from other equipment

You can record from other video equipment (VCR, camera, etc.)

### Preparation

- Connect the equipment to this unit's input terminals.  
– Turn the unit off before making connections.  
– If audio output on the other equipment is monaural, use a stereo-monaural conversion cable (not included).
- Insert the tape, ensuring its tab is in place and find the place to start recording.



- 1 Press [▲ CH▲] or [▼ CH▼] to select "AU" channel.



- 2 Press [▶] (play) to find the place to start recording.
- 3 Press [||], then while pressing [VCR], press [● REC] to put the unit in recording standby mode.
- 4 Press [SPEED] to select the tape speed.  
Each time you press the button:  
SP → EP → VP  
↑
- 5 Start play on the other equipment.
- 6 Press [||] when you want to start recording.

To stop  
Press [■].

- To make a timer program to record from other equipment (⇒ page 38)



VCR



## To check, correct, and cancel timer programs

### ■ To check a program

- 1 Press [PROG].  
The timer-programming screen appears.

### ■ To correct a program

While the timer programming screen is on the television,

- 1 Press [PROG] to highlight the program you want to correct and press [ENTER].
- 2 Select the item with [◀, ▶] and correct it with [▲, ▼].

	DATE	CH	ON	OFF	1/2
1	27WE	2	8:02PM	9:30PM	SP
2	SU-SA	125	10:30AM	11:00AM	/A
3	SU	14	3:00PM	4:00PM	EP
4	19TU	5	10:15PM	11:30PM	VP
5	28TH	AV	8:02PM	9:30PM	SP
6	30SA	4	7:10PM	7:55PM	VP
7	----	--	-:-	-:-	
8	----	--	-:-	-:-	
SELECT :◀▶ -/+:◀▶					

### ■ To cancel a program

While the timer programming screen is on the television,

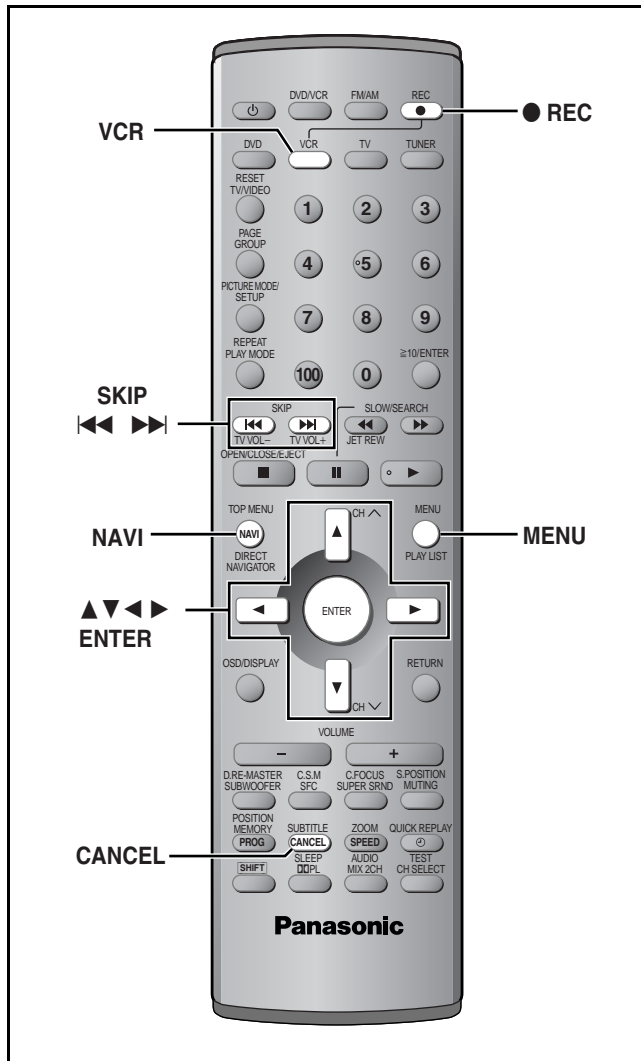
- 1 Press [PROG] to highlight the program you want to cancel.
- 2 Press [CANCEL].

### To clear the timer programming screen

Press [MENU].

## Auto SP/EP change

The unit switches tape speed to EP if it determines there is not enough tape to record the entire program in SP mode. The change


**VCR**

The unit saves the date, channel, time, and category of the recordings you make and shows them on the Jet Navigator list, making it easier to find and play them. It can save the data for up to 14 recordings on a tape, for 20 different tapes, and for a total of 50 recordings.

## Saving Jet Navigator data

- 1 Press [MENU] to display the “VCR MENU” screen.
- 2 Press [▲, ▼] to select “OPTION” menu and press [ENTER].
- 3 Press [▲, ▼] to select “JET NAVIGATOR” and press [◀, ▶] to change the setting to “ON”.

OPTION			1/2
OSD	●ON		OFF
TAPE SELECT	●T120		T160 T180
BLUE BACK	●ON		OFF
JET NAVIGATOR	●ON		OFF
DELETE NAVIDATA	●NO		YES
JET SEARCH	x27		●x35
SELECT	: [V] [A]		-/+ : [V] [A]
END	: MENU		

- 4 Press [▲, ▼] to select “TAPE SELECT” and press [◀, ▶] to set the length of the tape you are using.  
T120: T30, T60, T90, T120 tapes  
T160: T140, T160 tapes  
T180: T180 tapes
- 5 Record programs (⇒ pages 36–38).  
The unit makes the list as you record.

## Using the Jet Navigator to find programs

- 1 Press [NAVI] to show the “JET NAVIGATOR” screen.
- 2 Press [NAVI] to highlight the program you want to watch.

The most recent program is highlighted first.

Once you have highlighted the program, wait about three seconds. The VCR then starts searching for the program and starts play.

JET NAVIGATOR			
DATE	CH	ON	CATEGORY
10/18	1	10:30PM	MUSIC
10/19	124	3:00PM	SPORT
10/21	5	10:15AM	--
10/23	AV	8:02PM	--
10/26	4	7:10AM	EDUCA
10/27	2	8:02AM	--
10/27	12	8:30PM	--
SELECT: NAVI, [V] [A]		END: MENU	

The channel, date, and time of a recording appear on the television when play starts.

### To clear the Jet Navigator list

Press [MENU].

### ■ To delete the Jet Navigator on a video cassette tape

Keep [CANCEL] pressed for more than 5 seconds while the Jet Navigator list appears. “-” appears on the list.

### ■ To delete all the Jet Navigator data stored in the VCR’s memory (⇒ page 44).



### Setting categories

Set categories to make it easier to see what kind of programs are in the list.

- 1 Press [▶] while the program you want to categorize is highlighted.
- 2 Press [▲, ▼, ◀, ▶] to select a category and press [MENU] to confirm and return to the previous screen.

Category	Indication	Icon
Movie	MOVIE	
Music	MUSIC	
Drama	DRAMA	
Education	EDUCA	
Documentary	DOCUM	
Sports	SPORT	
Children	CHILD	
News	NEWS	
Others	OTHER	

### To return to the Jet Navigator list

Press [MENU].

#### Note

- If you have already stored 14 programs on a tape and you then store another one, the new item is added and the oldest is deleted.
- "REMAINING PROGRAM 0 DELETE JET NAVIGATOR DATA" appears when you try to store more than fifty programs. The new item is added and the oldest item is deleted.
- "REMAINING CASSETTE 0 FOR JET NAVIGATOR DATA" appears when you try to store items for more than 20 tapes. Delete all the Jet Navigator data in the VCR if you want to save the data for the tape (➡ page 44).
- The list does not appear when playing tapes recorded on other equipment.
- Parts of the list data are recorded on the tape. Take care when recording over older recordings that you do not overlap it. It is recorded within a few minutes either side of the beginning of the recording (longer if you used EP or VP).

### To demonstrate the Jet navigator function

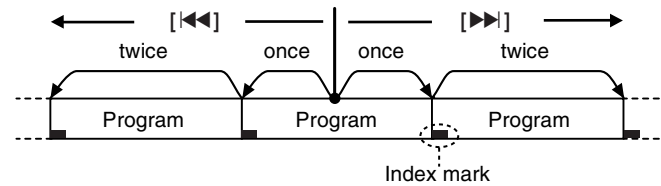
Keep [NAVI] pressed for more than 5 seconds without inserting a cassette tape.

## Finding programs—VHS Index Search System (VISS)

Use the index marks on a tape to find sections to play. The unit adds index marks when recording starts. To add them manually during recording, press [● REC] while pressing [VCR].

While stopped or during play

Press [◀◀] (backward) or [▶▶] (forward) to skip to the part you want to play.

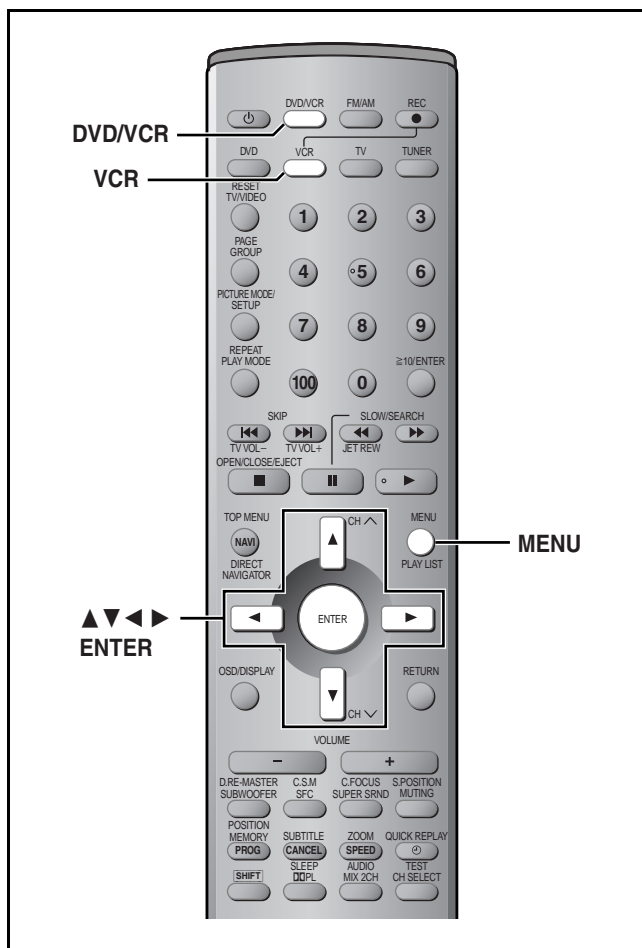


The channel, date, and time of a recording appear on the television when play restarts.

- Up to 20 index signals can be searched for in both directions.
- You can reduce the number of skips by pressing the opposite button.
- This feature may not work correctly if the marks are too close together. Make recordings of at least 15 minutes (25 minutes in VP mode).



VCR



The clock is set automatically after Plug-in Auto Tuning (➡ page 15). Do the following if you want to set it again or if the time is not set correctly.

While the VCR MENU is displayed

**1** Press [▲, ▼] to select “CLOCK SET” and press [ENTER].

**2** Press [▲, ▼] to select “AUTO CLOCK SET” and press [ENTER].

Auto setting starts. This can take some time.

**To stop midway through**  
Press [MENU].

■ **If the unit couldn't set the clock automatically**  
The MANUAL CLOCK SET screen appears. Set the time manually (➡ below).

**2** Press [▲, ▼] to select “MANUAL CLOCK SET” and press [ENTER].

**3** Press [◀, ▶] to select the item you want to change and press [▲, ▼] to change the setting.

**4** Press [MENU] to start the clock and exit the setting screen.

## ■ Time reset function

To return the clock to the exact hour, wait until the clock in the MANUAL CLOCK SET screen is within 2 minutes either side of the hour (e.g., between 11:58:00 and 12:01:59) press [MENU] to clear the screen. The clock changes to the exact hour.



VCR

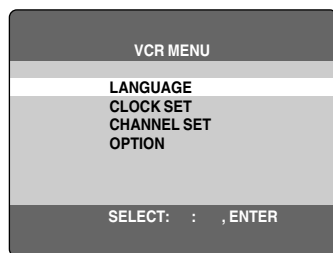
Change the settings to suit your preferences and to suit the unit to the environment in which it is being used. These settings are retained in memory until they are changed, even if the unit is turned off.

### Preparation

- Press [VCR] to put the remote control in VCR mode.
- Press [DVD/VCR] to select “VCR” as the source.

Before changing the settings

**Press [MENU] to show the VCR MENU.**



## LANGUAGE

Select the language for these menus and other on screen displays.

While the VCR MENU is displayed

**1** Press [▲, ▼] to select “LANGUAGE” and press [ENTER].

**2** Press [▲, ▼] to choose the preferred language.

- ENGLISH (Factory preset)
- ESPAÑOL
- FRANÇAIS

Press [MENU] to confirm and return to the previous screen.

## CHANNEL SET

The unit tunes automatically after you plug it in and turn it on for the first time (➡ page 15, Plug-in Auto Tuning), but you can start the process again if necessary.

• Make sure you have tuned to a television channel. This does not work if you have selected “AU” channel.

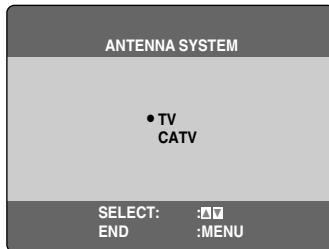
While the VCR MENU is displayed

**1** Press [▲, ▼] to select “CHANNEL SET” and press [ENTER].

### ANTENNA SYSTEM

**2** Press [▲, ▼] to select “ANTENNA SYSTEM” and press [ENTER].

**3** Press [▲, ▼] to select “TV” or “CATV” to suit the type of antenna you are using.



Channels are set corresponding to the antenna system you select. This is set automatically when you do Plug-in Auto Tuning.

#### To exit the settings screen

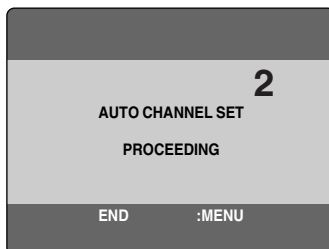
Press [MENU] until the screen disappears.

### AUTO

Auto tuning searches for TV stations and memorizes every tuned program position. Other program positions are skipped. (Channel range ➡ right)

**2** Press [▲, ▼] to select “AUTO” and press [ENTER].

Auto tuning starts. It takes three or more minutes to complete.



#### To stop partway through

Press [MENU].

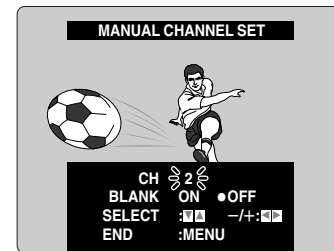
### MANUAL

You can manually preset channels that are skipped when using the auto channel setting, and manually skip channels that are preset.

**2** Press [▲, ▼] to select “MANUAL” and press [ENTER].

**3** Press [▲, ▼] to select “CH” and [◀, ▶] to select the channel.

**4** Press [▲, ▼] to select “BLANK” and [◀, ▶] to select “ON” or “OFF”.



#### To exit the settings screen

Press [MENU] until the screen disappears.

### ■ Channel range

#### •TV mode

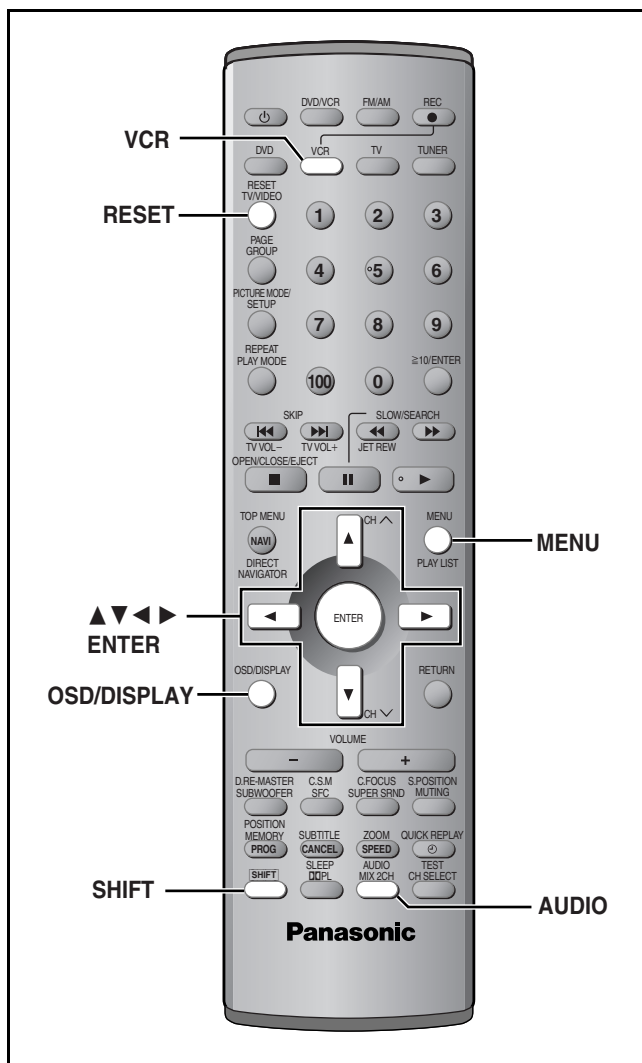
Band	Airwaves
VHF	2–13
UHF	14–69

#### •CATV mode

Band	Cable
VHF	2–13
CATV LOW BAND	95–99
CATV MID/SUPER BAND	14–36
CATV HYPER BAND	37–65
ULTRA BAND	66–94
	100–125
SPECIAL CATV CHANNEL	1



VCR



## OPTION

While the VCR MENU is displayed

- 1 Press [**▲**, **▼**] to select the “OPTION” and press [**ENTER**].
- 2 Press [**▲**, **▼**] to select the item and press [**◀**, **▶**] to change the setting.

OPTION			1/2
OSD	●ON		OFF
TAPE SELECT	●T120		T160 T180
BLUE BACK	●ON		OFF
JET NAVIGATOR	ON		●OFF
DELETE NAVIDATA	●NO		YES
JET SEARCH	x27		●x35
SELECT	: [ENTER]		-/+ : [LEFT] [RIGHT]
END	: MENU		

OPTION			2/2
MTS	●MAIN		SAP MONO
DISPLAY	BRIGHT		●DIM OFF
SELECT	: [ENTER]		-/+ : [LEFT] [RIGHT]
END	: MENU		

To exit the settings screen

Press [**MENU**] until the screen disappears.



VCR

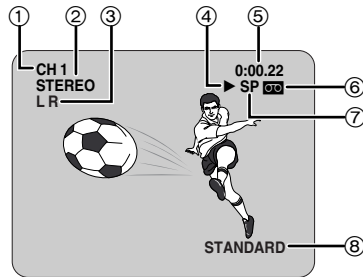
Items	Settings (Underlined items are the factory preset.)
<b>OSD</b> (⇒ page 45, On-screen display)	<u>ON</u> : Messages appear on the television for about five seconds after you perform operations. OFF: Messages do not appear.
<b>TAPE SELECT</b> Set the length of tape you are using so the unit can show the correct remaining time.	T120: T30, T60, T90, T120 tapes T160: T140, T160 tapes T180: T180 tapes
<b>BLUE BACK</b>	<u>ON</u> : The screen shows a blue background when you play unrecorded portions. OFF
<b>JET NAVIGATOR</b> (⇒ page 40)	ON: Jet Navigator data automatically registered. OFF: Data not registered.
<b>DELETE NAVIDATA</b> Delete all the Navigation data registered in the unit. See page 40 to delete data on a single tape.	<u>NO</u> YES: Then press [ <b>ENTER</b> ] when you want to delete all the Jet navigator data.
<b>JET SEARCH</b> (⇒ page 34) Set the speed for JET SEARCH when playing EP and VP tapes.	x27 <u>x35</u> Select x27 if the picture is poor at x35.
<b>MTS</b> (⇒ page 45, Changing audio) Set the MTS (Multi-channel Television Sound Stereo) reception type.	<u>MAIN</u> : To receive stereo broadcasts. SAP: To receive SAP when being broadcast. MONO: To receive monaural broadcasts (e.g., when reception is poor).
<b>DISPLAY</b> Set the brightness of the unit's display when the unit is in standby mode.	BRIGHT: The display is bright all the time. DIM: The display dims when the unit is in standby mode. OFF: The display turns off when the unit is in standby mode.

## On-screen display

To see these displays, set the OSD item in the OPTION menu to ON.

### Press [OSD/DISPLAY].

The time and operation details appear on the screen for about 5 seconds.



①	<b>Channel display</b> Displays the cable television channel or television channel currently being received.
②	<b>STEREO/SAP indication</b> Indicates when a program is broadcast in stereo or SAP. ➡ right for audio type details.
③	<b>L and R indicators</b> The Left (L) and Right (R) indicators show which sound mode is selected as follows: Stereo: Both the L and R indicators appear. L: The L indicator appears. R: The R indicator appears. Normal: Neither the L and R indicator appears.
④	<b>Tape running display</b> Shows operations taking place.
⑤	<b>Shows the time and tape counter</b> Press [OSD/DISPLAY]. The display changes as follows. Present time → Tape counter → Remaining tape time Using index search: "S 01" to "S 20" is displayed. Using jet rewind: "J:REW" is displayed. ● Press [SHIFT]+[RESET] to reset the tape counter (elapsed time) to "0:00.00". ● The remaining time is approximate. It will be incorrect if you set the wrong tape time in the TAPE SELECT item in the OPTION menu and if the tape is of poor quality.
⑥	<b>Cassette in indicator</b> Shows whether you have loaded a cassette.
⑦	<b>Tape speed indicator</b> (➡ page 36)
⑧	<b>Picture mode indicator</b> (➡ page 35)

#### Note

- These displays do not appear when paused or during slow play.
- The on screen display may be disturbed depending on the playback tape or the input signal.

## Changing audio

When a stereo and/or SAP broadcast is received, "STEREO" and/or "SAP" appear showing the type of broadcast.

### To change the audio

#### Press [SHIFT]+[AUDIO].

The audio changes as follows:

- When playing a tape:  
Stereo → L → R → Normal audio track
- While watching the television:  
Stereo → L → R

The table below shows the TV broadcast type, "MTS" settings, and audio recording patterns.

TV broadcast	MTS setting	Audio track		
		Normal (Mono)	Hi-Fi	
			Left	Right
Mono	MAIN or SAP	Mono	Mono	Mono
Stereo	MAIN or SAP	L + R (Mixed)	Left	Right
Mono and SAP	MAIN	Mono	Mono	Mono
	SAP	Mono	Mono	SAP
Stereo and SAP	MAIN	L + R (Mixed)	Left	Right
	SAP	L + R (Mixed)	L + R (Mixed)	SAP

Be sure that "MTS" is set to "MAIN" or "SAP" to record on the Hi-Fi audio tracks.

#### Note

- Switch to "MONO" for viewing or recording if a stereo or SAP broadcast is impaired by poor reception.
- To resume stereophonic recording, set "MTS" to "MAIN" or "SAP".

### Auto bilingual choice function

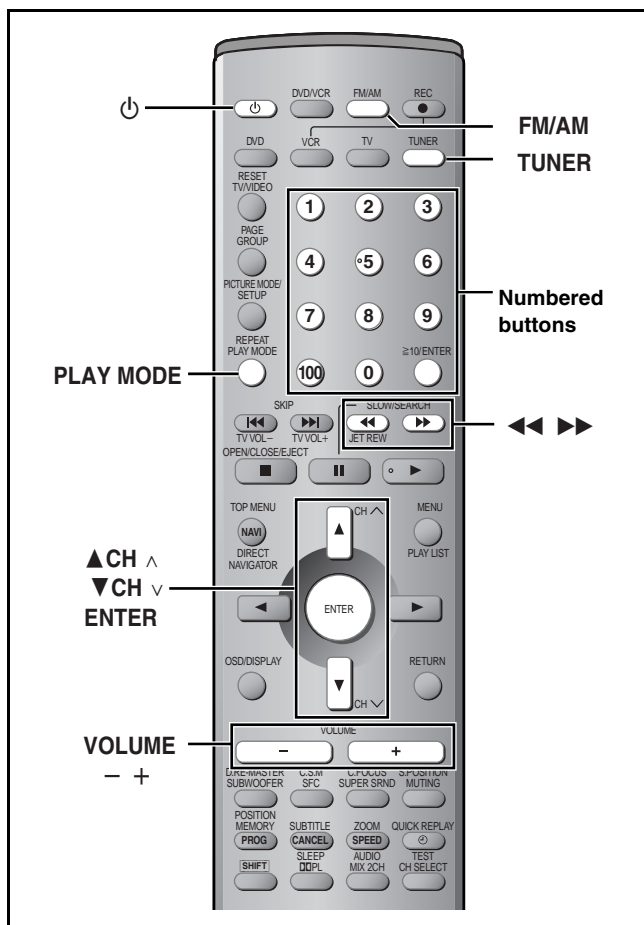
When you play back recordings of stereo or SAP broadcasts, these audio types are automatically selected. The unit may select a different type if you start play midway through the program. Press [SHIFT]+[AUDIO] to change the type if this occurs.

This function does not work if:

- The tape was recorded on a deck without this system.
- The tape is a recording from external equipment.



VCR



## Preparation

- Press [TUNER] to put the remote control in TUNER mode.
- Press [⏻] to turn on the unit.
- Press [FM/AM] to select “FM” or “AM” as the source.

## Manual tuning

- 1 Press [◀◀] or [▶▶] to select the frequency of the required station.

TUNED: Displayed when a radio station is tuned.

ST: Displayed when a stereo FM broadcast is being received.

Press and hold [◀◀] or [▶▶] until the frequency starts scrolling to start automatic tuning. Tuning stops when a station is found.

- 2 Adjust the volume.

### ■ If noise is excessive in FM

Press [PLAY MODE] to display “MONO”.

Press [PLAY MODE] again to cancel the mode. The mode is also canceled when you change the frequency.

### ■ FM frequency step

The step is factory-set to 0.2 MHz, but you can change it to receive broadcasts allocated 0.1-MHz steps.

- 1 Press [FM/AM] to select “AM”.
- 2 Press and hold [FM/AM].

After a few seconds the display changes to show the current minimum frequency. Continue to hold the button down. The minimum frequency changes and the step is changed.

To return to the original step, repeat the above steps.

### Note

Any FM and AM frequencies preset in channels will be initialized by this procedure. Preset them again.

## Preset tuning

Preset channels to make selection simple.

Up to 15 stations can each be set in the FM and AM bands.

### Automatic presetting

- 1 Tune to “FM 87.9” MHz or “FM 87.5” MHz (⇒ left).

- 2 Press and hold [ENTER].

Release the button when “AUTO” is displayed.

The tuner presets all the stations it can receive into the channels in ascending order.

“SET OK” is displayed when the stations are set. The last station to be set is then played.

- 3 Tune to “AM 520” kHz.

- 4 Press and hold [ENTER].

“ERROR” is displayed

Presetting was unsuccessful. Preset manually.

### Manual presetting

- 1 Tune to the station (⇒ left).

- 2 Press [ENTER].

- 3 While “PGM” is flashing

Press the numbered buttons to select a channel.

Alternatively, press [▲ CH ^] or [▼ CH v] then press [ENTER].

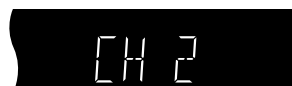


The station occupying a channel is erased if another station is preset in that channel.

### Selecting channels

- 1 Press [FM/AM] to select “FM” or “AM”.

- 2 Press the numbered buttons or [▲ CH ^] or [▼ CH v] to select the channel.



To select a 2-digit number

Example: To select channel 12, press [≥10] ⇒ [1] ⇒ [2]

### Note

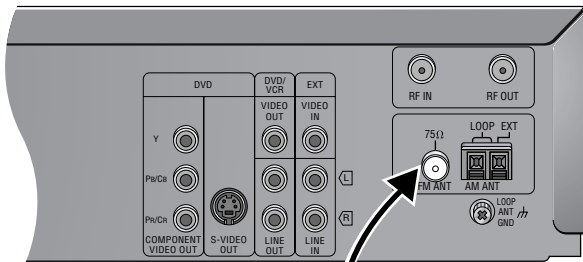
The unit of display is MHz for FM radio and kHz for AM radio when the selector is in TUNER mode.

## Optional FM antenna connection

Use FM outdoor antenna if radio reception is poor.

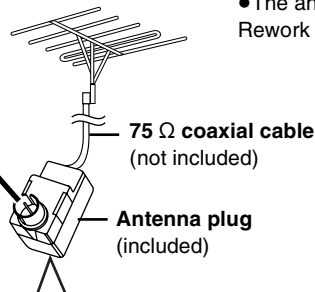
### Note

- Disconnect the outdoor antenna when the unit is not in use.
- Do not use the outdoor antenna during an electrical storm.

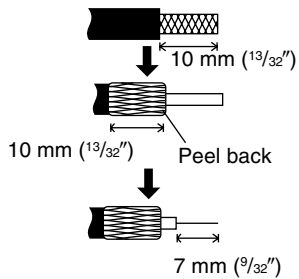


### FM outdoor antenna (Using a television antenna)

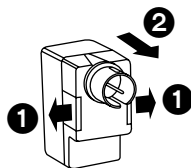
- Disconnect the FM indoor antenna.
  - The antenna should be installed by a competent technician.
- Rework your outdoor antenna's 75  $\Omega$  coaxial cable as follows.



① Remove a piece of the outer vinyl insulator.

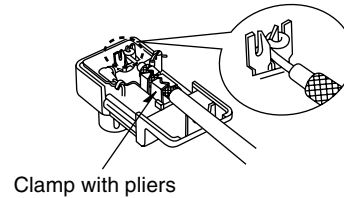


② Carefully pull the tabs apart to remove the cover.

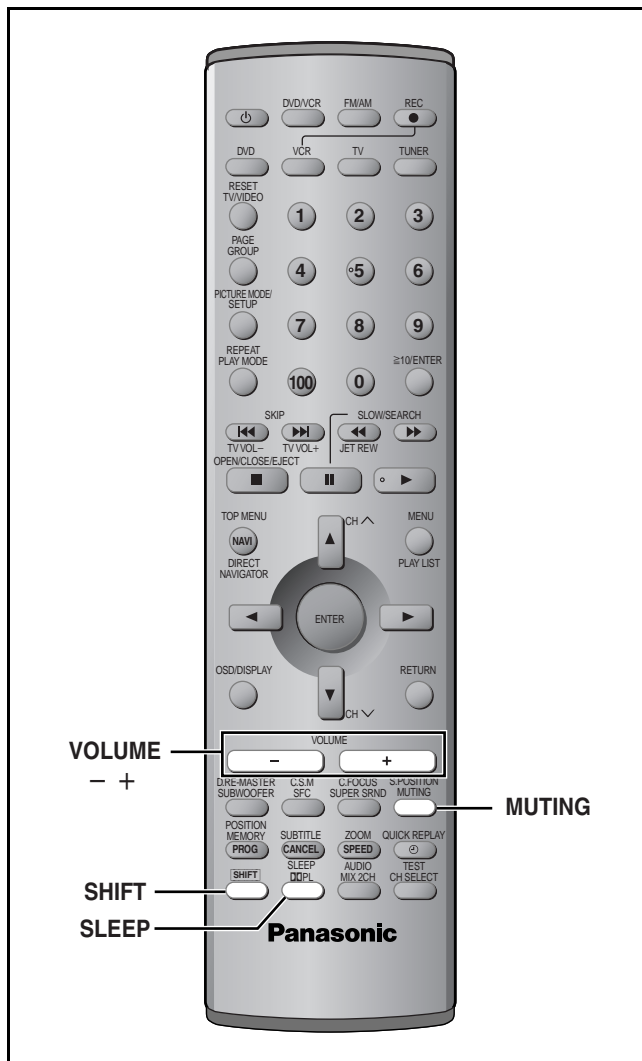


③ Install the coaxial cable.

Clamp the cable conductor, and wind it on so that it does not contact anything else.



④ Attach the cover.



## The sleep timer

Set the unit to switch to standby after a certain time.

**Press [SHIFT]+[SLEEP] to select the time (minutes).**



Each time you do this:

30 → 60 → 90 → 120 → OFF

### To cancel the timer

Press [SHIFT]+[SLEEP] to select "OFF".

### To check the SLEEP setting

Press [SHIFT]+[SLEEP] once.

- The time remaining appears.

### To change the setting

Repeat the procedure from the beginning.

#### Note

The VCR's timer program recording functions even when the power is turned off by the sleep timer.

## Muting the volume

**Press [MUTING].**



Volume is reduced to minimum.

### To cancel

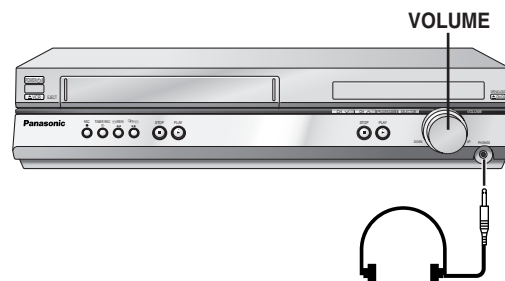
Press [MUTING] again or reduce the volume to minimum (--- dB), then raise it to the required level.

Muting is also canceled when you switch the unit to standby.

## Using headphones

### 1 Reduce the volume and connect the headphones (not included).

Headphone plug type: 3.5 mm (1/8") stereo



### 2 Adjust headphone volume with [VOLUME DOWN, UP].

Audio is automatically switched to stereo (2-channel).

#### Note

Avoid listening for prolonged periods of time to prevent hearing damage.





## Play a Dolby Digital or DTS source.

The Dolby Digital or DTS indicator lights.



RADIO  
&  
OTHERS

### ■ To down-mix Dolby Digital or DTS (multiple-channel) signals to 2 channels

Press [MIX 2CH].

To cancel, press [MIX 2CH] again.

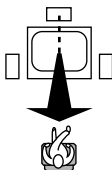
### When “D.MIX” flashes on the display **DVD-A**

The DVD-AudioD 0.004-on tains-oD 0.00m-l148(t)75.(tipl-cha(nnl si(gnls t)94(ha(t)75.(oD 0.004-)-111(a(no t)94( bey ))JTJT D 0.0035 Tc 0 Tw [ dow)-1693

## Center Focus

You can make the sound of the center speaker seem like it is coming from within the television.

Press **[SHIFT]+[C.FOCUS]**.



Each time you do this:

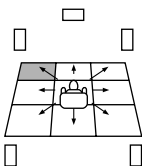
CENTER FOCUS1 (Normal) → CENTER FOCUS2 (Enhanced)

↑ OFF ↓

- This does not work when Super Surround is turned on.
- This will have less effect when Dolby Pro Logic is turned on.

## Seat position

Using this function makes you feel like you are sitting in the ideal seating position (in the center of the circle formed by the speakers), even if you cannot due to the layout of your room.



**1 Press**  
**[SHIFT]+[S.POSITION].**



**2 Press [SHIFT]+[S.POSITION]**  
**repeatedly to select a position.**



### To cancel

Press **[SHIFT]+[S.POSITION]** repeatedly to clear "S.POS".

## Adjusting the bass

Press **[SUBWOOFER]**.



Each time you press the button:

SUBW 1 → SUBW 2 → SUBW 3 → SUBW 4 (factory preset)

↑

## Speaker level adjustments

If the level of the speakers appears to be different while listening to a source, adjust the level of the speakers to the same apparent level.

### Preparation

- Dolby Digital and DTS: Turn off the other sound field systems.
- Dolby Pro Logic: Press **[DOLPL]**.
- Press **[VOLUME +]** or **[-]** to set the volume level normally used for enjoying the source.

**1 Press [SHIFT]+[TEST] to output a test signal.**

Lch: Front left  
Cch: Center  
Rch: Front right  
RSch: Right surround  
LSch: Left surround

**2 Press [VOLUME +] or [-].**

L, R: -16 dB to 0 dB  
C, RS, LS: -10 dB to +6 dB

To stop the test signal, press **[SHIFT]+[TEST]** again.

### ■ To adjust speaker level during play

**1 Press [CH SELECT] to select the speaker.**

L → C → R → RS → LS → SW

↑

SW: Subwoofer

You can only adjust SW if there is output from the subwoofer channel.

**2 Press [VOLUME +] or [-].**

L, R: -16 dB to 0 dB  
C, RS, LS: -10 dB to +6 dB  
SW: -10 dB to +10 dB

### ● Super Surround

Press **[SUPER SRND]** then adjust the surround speaker level.

S: -10 dB to +6 dB

## Attaching to a wall

### Note

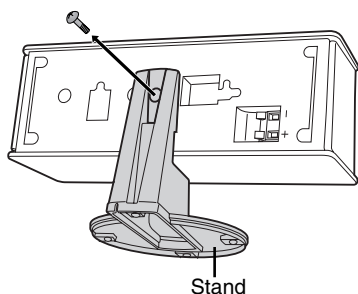
The wall or pillar on which the speakers are to be attached should be capable of supporting 10 kg (22 lb.) per screw.

### 1 Remove the stand. (SC-HT810V only)

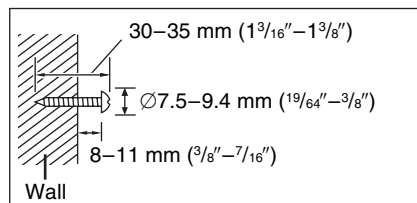
#### BEFORE REMOVING THE STAND

- Take the speaker cable out of the stand's hole if it is threaded through.
- Lay the speaker on a soft cloth.

Unscrew the screw with a Phillips-head screwdriver.

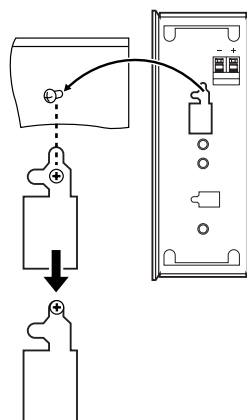


### 2 Screw a screw (not included) into the wall.

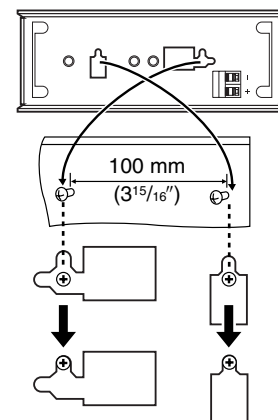


### 3 Fit the speaker securely onto the screw with the hole or holes.

#### Vertical



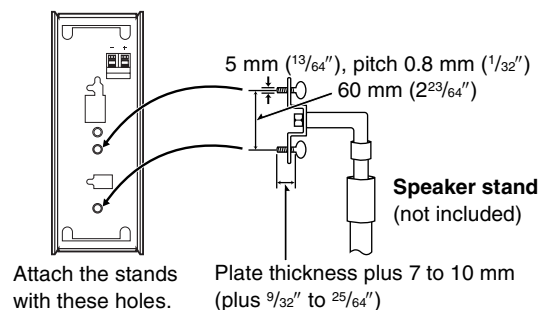
#### Horizontal



## Fitting speaker stands (optional)

### Preparation

- Remove the stand (SC-HT810V only → step 1 above).
- Ensure the stands meet these conditions before purchasing them.
  - Observe the diameter and length of the screws and the distance between screws as shown in the diagram.
  - The stands must be able to support over 10 kg (22 lb.).
  - The stands must be stable even if the speakers are in a high position.



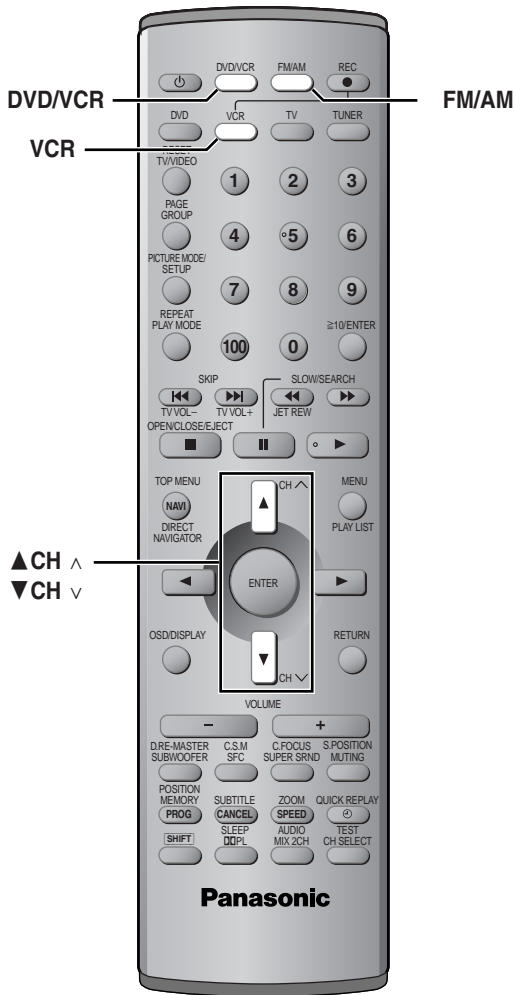
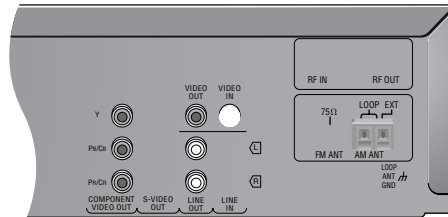
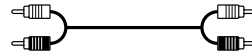
Attach the stands with these holes.

Plate thickness plus 7 to 10 mm (plus 9/32" to 25/64")

## Listening to an external source/ Recording to other equipment

### Audio cable

White (L)  
Red (R)



### A You can record sound from discs, video cassette tapes, or radio, etc., to a tape deck.

#### 1 Discs

Press [DVD/VCR] to select "DVD" as the source.

#### Video cassette tapes

Press [DVD/VCR] to select "VCR" as the source.

#### Radio

Press [FM/AM] to select "FM" or "AM".

#### 2 Start recording and play.

Refer to the manual of the other unit for details.

### B You can playback the sound from a tape deck/laser disc player, etc., through this unit's speakers.

- 1 Press [VCR] to put the remote control in VCR mode.
- 2 Press [DVD/VCR] to select "VCR" as the source.
- 3 Press [▲ CH ▲] or [▼ CH ▼] to select "AU" channel.
- 4 Start play.

#### When connecting a record player

We recommend using a record player with a built-in phono equalizer. If your player doesn't have a built-in equalizer, connect it first to a separate equalizer and then connect that to this unit.

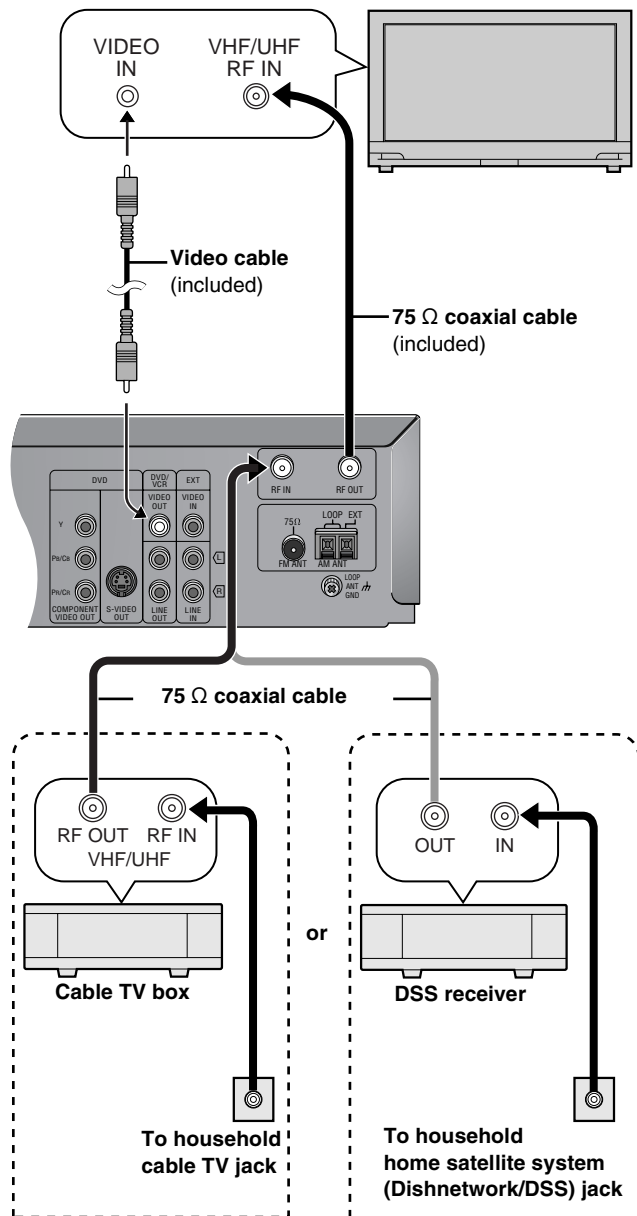
- The equipment connections described are examples.
- Peripheral equipment and optional cables sold separately unless otherwise indicated.
- Before connection, turn off all equipment and read the appropriate operating instructions.

## Connecting a cable TV box/satellite receiver

Subscribe to a cable TV or satellite TV service.

- Consult your service provider regarding appropriate cable box or satellite receiver.
- Select the applicable input on your television to view the output from your cable box/satellite receiver through this unit.
- The signal from the cable TV box or satellite receiver passes through this unit to the television even when this unit is turned off.

### One cable TV box/satellite receiver



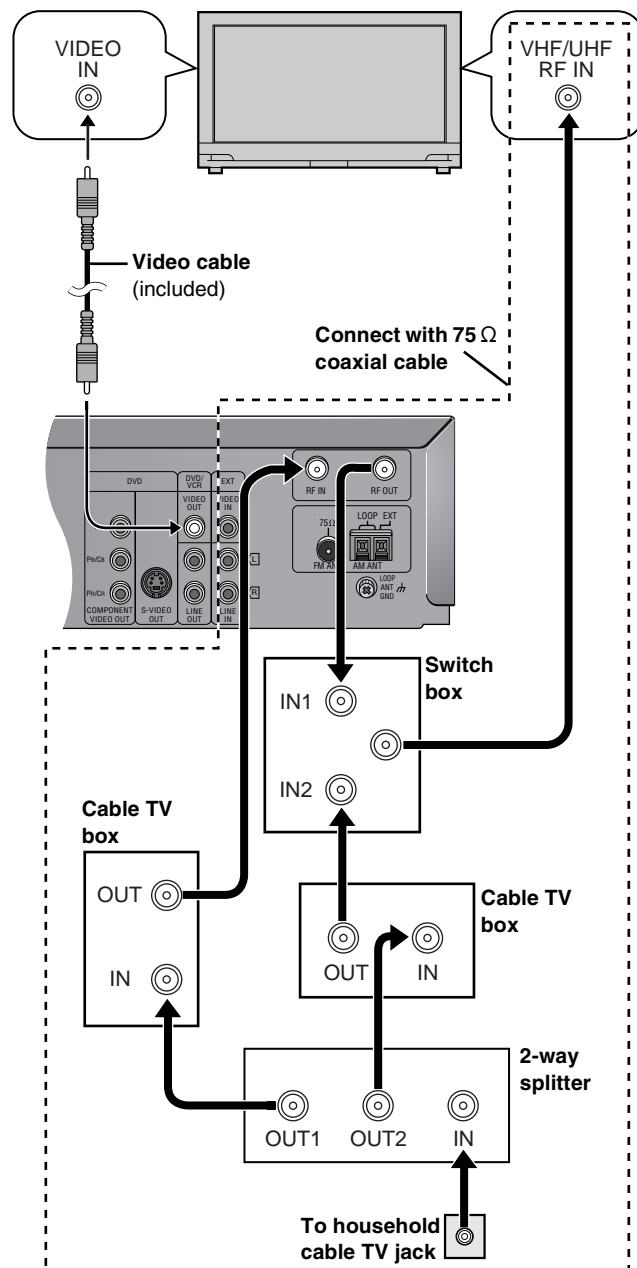
#### Note

When a home satellite system (Dishnetwork/DSS) is connected, auto tuning and auto clock setting may not operate properly. Set the clock manually (➡ page 42).

- Change the video input on the television when you want to watch another program while recording.
- You cannot do a timer recording unless the channel is first selected on the cable TV box or DSS receiver.

### Two cable TV boxes

- You can record and view both scrambled and unscrambled channels if connections are made as shown in the diagram below.

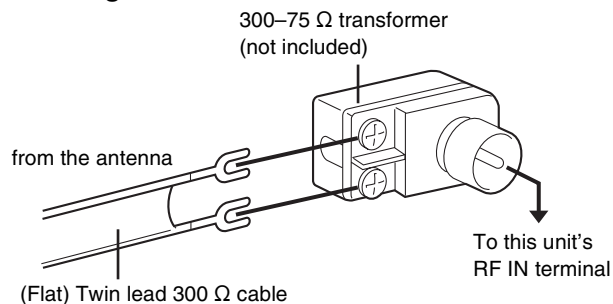


- Change the video input on the television when you want to watch another program while recording.
- You cannot do a timer recording unless the channel is first selected on the cable TV box.

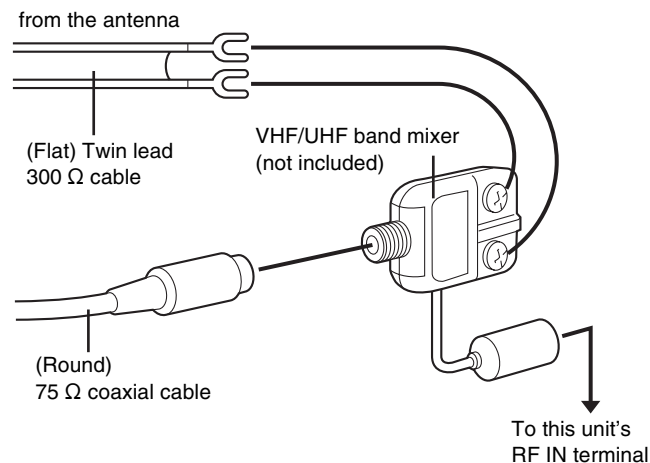
## Other antenna connections to the unit

Use one of the following connections to suit the antenna lead.

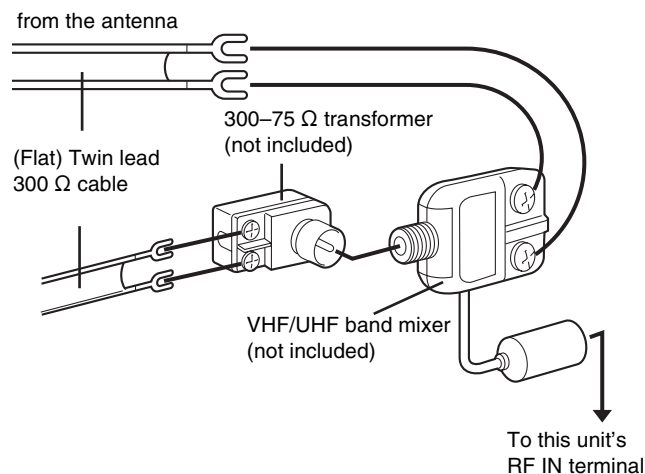
### ■ A single twin lead



### ■ A twin lead and a coaxial cable



### ■ Two twin leads

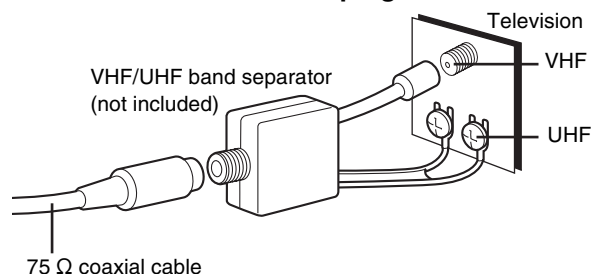


- If your television has both lead and coaxial VHF terminals, use the lead connection to minimize signal loss.

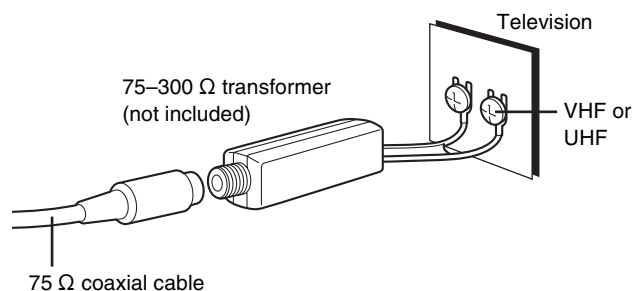
## Other antenna connections from the unit to the television

Use one of the following connections to suit the antenna terminals on your television. Refer to the television's operating instructions.

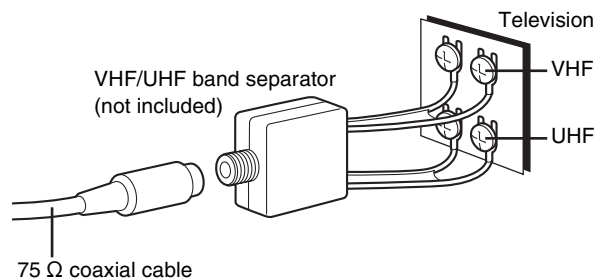
### ■ A twin lead and coaxial plug terminal



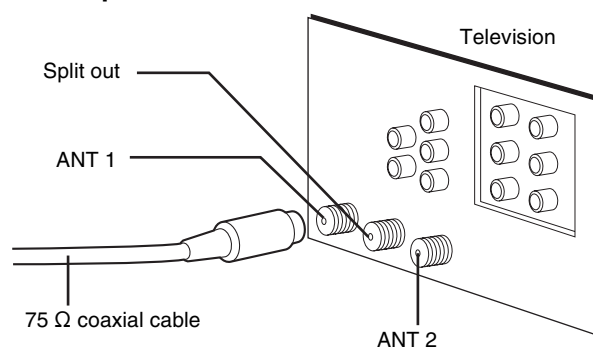
### ■ A twin lead terminal



### ■ Two twin lead terminals



### ■ Multiple antenna terminals



- Connect to one of the terminals, then change the television's setting as necessary.

# Troubleshooting guide

Before requesting service, make the below checks. If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem:

**In the U.S.A., contact the Panasonic Customer Call Center at 1-800-211-7262, or e-mail [consumerproducts@panasonic.com](mailto:consumerproducts@panasonic.com), or the website (<http://www.panasonic.com>).**

**In Canada, contact the Panasonic Canada Inc. Customer Care Centre at 1-800-561-5505, or visit the website ([www.panasonic.ca](http://www.panasonic.ca)), or an authorized Servicentre closest to you.**

## General

Page

No power.	●Insert the AC power supply cords and system cable securely.	14
No response when buttons pressed.	●Some operations may be prohibited by the disc. ●The unit may not be operating properly due to lightning, static electricity or some other external factor. <b>Reset procedure:</b> Press [⏻] to switch the unit to the standby mode and then back to ON. Alternatively, press [⏻] to switch the unit to the standby mode, disconnect both AC power supply cords, and then reconnect. ●Check that the batteries are installed correctly. ●The batteries are depleted: Replace them with new ones. ●Point the remote control at the remote control sensor and operate.	— — 2 2 —
Cannot select alternative languages.	●This function depends on software availability. ●Try selecting from the disc's menu if one is available.	— 19
The SETUP menu cannot be accessed.	●Select "DVD" as the source. ●Cancel all group, program and random play.	— 25
Cannot operate the VCR.	●Press [VCR] to switch the remote control mode to VCR. ●The unit is in timer recording standby ("⏻" is on on the unit's display).	— 38
Cannot operate the TV.	●Press [TV] to switch the remote control mode to TV. ●Check the TV maker setting.	— 16
Cannot operate the DVD.	●Press [DVD] to switch the remote control mode to DVD.	—
Television reception worsens after connecting the unit.	●This can occur because the signals are being divided between the unit and the television. You can solve this with a signal booster, available from audio-visual suppliers. Consult your dealer if reception does not improve.	—
Cannot eject cassette.	●The VCR is in timer recording standby or actually recording. If you need to eject the tape, press [⏻] first so "⏻" goes out.	38

## Disc play

Play doesn't start (or stops immediately) when you press [▶] (play).	●Condensation has formed: Wait 1 to 2 hours for it to evaporate. ●This unit cannot play discs other than the ones listed in these operating instructions. ●This unit cannot play DVD-Video with a region number other than "1", "ALL" or multiple region numbers including "1". ●The disc may be dirty and may require cleaning. ●Ensure that the disc is installed with the label of the side to be played facing upwards. ●Check that the DVD-RAM has something recorded on it.	— 6 Cover 6 18 —
No menu play.	●This function depends on software availability.	—
No subtitles.	●This function depends on software availability. ●Subtitles are cleared from the television. Display the subtitles. ●Subtitle position is wrong. Adjust the position.	— 26 26
The position of the subtitles is incorrect.	●Change the position of the subtitles with "Subtitle Position" in the on-screen icon menus.	26
Soundtrack and/or subtitle language is not the one selected with the SETUP menus.	●This function depends on software availability.	—
Cannot change angle.	●This function depends on software availability. Even if a disc has a number of angles recorded, these angles may be recorded for specific scenes only.	—
Cannot add markers.	●You cannot add markers while playing a play list or if the disc's play time doesn't appear on the unit's display.	—
There are already markers. <b>RAM</b>	●The unit reads and displays the markers added with a DVD video recorder. You can clear them but reappear when you switch the unit to standby, change the source, or open the disc tray.	—
Marker numbers I added are different when I call them up. <b>RAM</b>	●The unit numbers markers by time so they change when you add and delete them.	—
Cannot select random or program play.	●You cannot select random or program play with some DVD-Video.	—
Folders deeper than the eighth layer on a data CD are not displayed correctly.	●Folders deeper than the eighth layer are displayed as the eighth layer.	—
You have forgotten your ratings password. Reset all the SETUP settings to Factory Preset.	●While stopped and "DVD" is the source, press and hold [◀◀] [⏮/REW], [▶▶] [PLAY] (DVD) and [▲] [DVD OPEN/CLOSE] on the main unit for about 3 seconds until "Initialized" disappears from the television. Turn the unit off and on again. All settings will return to the default values.	—
The unit doesn't play the data type (WMA/MP3 or JPEG) selected in "Mixed Disc—Audio & Stills" in the SETUP menu.	●Reload the disc for the setting to be effective. Press [SHIFT]+[OPEN/CLOSE/EJECT] to open the tray, then press [▶] (PLAY) to start play.	—



INFO



## Sound

<b>No sound. Distorted sound.</b>	<ul style="list-style-type: none"> <li>● Check the connections.</li> <li>● Turn the volume up.</li> <li>● Turn muting off.</li> <li>● Switch off the unit, determine and correct the cause, then switch the unit on.</li> </ul> <p>Causes include:</p> <ul style="list-style-type: none"> <li>– Shorting (bare wires touching) of positive and negative speaker wires.</li> <li>– Using speakers with an impedance lower than that rated for this unit.</li> <li>– Straining of the speakers through excessive volume or power.</li> <li>– Using the unit in a hot environment without proper ventilation.</li> </ul>	11, 14 — 48 —
<b>Humming heard during play.</b>	<ul style="list-style-type: none"> <li>● An AC power supply cord or fluorescent light is near the subwoofer. Keep other appliances and cords away from the subwoofer.</li> </ul>	—
<b>There is noise when playing a video tape.</b>	<ul style="list-style-type: none"> <li>● Adjust the tracking.</li> <li>● The tape is old or damaged.</li> </ul>	35 —

## Picture

<b>No picture.</b>	<ul style="list-style-type: none"> <li>● Check the connection.</li> <li>● Make sure the television is on.</li> <li>● Ensure the television's video input setting (e.g., VIDEO 1) is correct.</li> </ul>	12, 13 — —
<b>The picture shown on the television is not normal. (The sides of the picture are cut off, the picture is stretched horizontally, or black bands appear at the top and bottom of the screen.)</b>	<ul style="list-style-type: none"> <li>● Go to Video in the SETUP menus, and change "TV Aspect" to suit your television.</li> <li>● Use the television to change the aspect to the correct one.</li> <li>● If your television cannot change the aspect when input is progressive, try changing 4:3 Aspect with the on-screen menu icons.</li> <li>● Ensure that the unit is connected directly to the television, and is not connected through an A/V selector or other equipment.</li> <li>● Connect to the component video input terminals on a 480P compatible television. (Video will not be displayed correctly if connected to an incompatible television.)</li> <li>● Change the size with the variable zoom function.</li> <li>● The images on PAL system DVD-Audio are compressed for display. They may also appear vertically stretched.</li> </ul>	31 30 — 13 27 —
<b>The picture on the television disappears or stripes appear on the screen.</b>	<ul style="list-style-type: none"> <li>● Mobile telephone chargers can cause some disturbance.</li> <li>● The location and orientation of the antenna are incorrect. If you are using an indoor antenna, change to an outdoor antenna.</li> <li>● The television antenna wire is too close to the unit. Separate the antenna wire of the television from the unit.</li> </ul>	— 47 —

## Disc picture

<b>Picture distorted.</b>	<ul style="list-style-type: none"> <li>● Some distortion is normal during SEARCH.</li> </ul>	—
<b>There is ghosting when progressive output is on.</b>	<ul style="list-style-type: none"> <li>● Press [PROGRESSIVE] to turn off progressive output. This problem is caused by the editing method or material used on DVD-Video, but should be corrected if you use interlace output.</li> </ul>	18
<b>Picture quality is poor.</b>	<ul style="list-style-type: none"> <li>● Check the settings in the On-Screen Menu Icons' Picture Menu.</li> </ul>	30
<b>Menus not displayed correctly.</b>	<ul style="list-style-type: none"> <li>● Change the zoom ratio to "×1.00".</li> <li>● With the on-screen icon menus, change "Subtitle Position" to "0" or change "4:3 Aspect" to "Normal".</li> </ul>	27 26, 30

## VCR picture

<b>The picture is noisy or is in black and white. Horizontal bars or lines run down the screen.</b>	<ul style="list-style-type: none"> <li>● Adjust the tracking.</li> <li>● Make sure the television's input setting is correct.</li> <li>● The video heads are dirty: clean them with a head-cleaning cassette.</li> <li>● The video heads are worn: consult your dealer.</li> <li>● The tape is old or damaged.</li> <li>● You cannot correctly play tapes recorded with other systems (e.g., PAL).</li> </ul>	35 — 59 — —
<b>Picture is distorted when stilled or during slow-motion.</b>	<ul style="list-style-type: none"> <li>● Some distortion is normal with tapes recorded using VP mode.</li> </ul>	—
<b>The blue back appears during play.</b>	<ul style="list-style-type: none"> <li>● You are playing a blank or poor quality part of the tape.</li> <li>● You can damage the unit if you play dirty or damaged tapes and this can cause the blue back to appear. Consult your dealer.</li> </ul>	— —
<b>The picture jiggles.</b>	<ul style="list-style-type: none"> <li>● Adjust the vertical hold.</li> </ul>	35




## Recording

" <b>⏻</b> " flashes when I try to start recording. Cannot record.	<ul style="list-style-type: none"> <li>● If the erasure prevention tab has been removed, cover the hole with adhesive tape.</li> </ul>	5
Timer recording doesn't record a program correctly.	<ul style="list-style-type: none"> <li>● Check the clock and calendar.</li> <li>● Set the channel and start and end times correctly.</li> <li>● Be sure to press [⏻] after programming to put the unit in timer recording standby.</li> <li>● Program times may be overlapped.</li> </ul>	— — 38 —
Cannot record from other equipment.	<ul style="list-style-type: none"> <li>● Press [▲ CH▲] or [▼ CH▼] to Select "AU".</li> <li>● Check the connections to the other equipment.</li> </ul>	37 37
Black bands appear in the recording.	<ul style="list-style-type: none"> <li>● Move the other equipment away from the television as it may be picking up interference.</li> </ul>	—
The copy of a videotape or DVD is very poor.	<ul style="list-style-type: none"> <li>● This unit complies with industry standards regarding the recording and duplication of copy-protected material. This includes commercial videotapes and DVDs. Consequently, copying not only infringes copyright laws but also presents serious technical difficulties. Even in cases where a copy can be made, the quality will be very poor.</li> </ul>	—

## Listening to the radio

Cannot select the tuner	<ul style="list-style-type: none"> <li>● Check and see if the subwoofer's AC power supply cord is connected.</li> </ul>	14
Noise is heard.	<ul style="list-style-type: none"> <li>● Adjust the position of the FM or AM antenna.</li> </ul>	—
"ST" flickers or doesn't light. Sound is distorted.	<ul style="list-style-type: none"> <li>● Use an outdoor antenna.</li> </ul>	47
A beat sound is heard.	<ul style="list-style-type: none"> <li>● Turn the television off or separate it from the unit.</li> </ul>	—
A low hum is heard during AM broadcasts.	<ul style="list-style-type: none"> <li>● Separate the antenna from other cables and cords.</li> </ul>	—

## Unit display

The unit's display disappears or fades once the power is turned off.	<ul style="list-style-type: none"> <li>● The DISPLAY setting is set to "DIM" or "OFF" under OPTION from the VCR MENU. Select "BRIGHT" if you want the display bright all the time.</li> </ul>	44
The tape counter isn't changing.	<ul style="list-style-type: none"> <li>● The tape counter does not change while playing unrecorded parts.</li> </ul>  <ul style="list-style-type: none"> <li>● The display also appears like this if the tape is dirty or damaged. Consult your dealer if this is the case.</li> </ul>	— —
"No PLAY"	<ul style="list-style-type: none"> <li>● You inserted a disc the unit cannot play; insert one it can.</li> <li>● You inserted a blank DVD-RAM.</li> </ul>	6 —
"No DISC"	<ul style="list-style-type: none"> <li>● You haven't inserted a disc; insert one.</li> <li>● You haven't inserted the disc correctly; insert it correctly.</li> </ul>	— 18
"F61"	<ul style="list-style-type: none"> <li>● Check and correct the speaker cord connections. If this does not fix the problem, there is a power supply problem. Consult the dealer.</li> </ul>	11, 14
"U11"	<ul style="list-style-type: none"> <li>● Disc is dirty. Wipe it clean.</li> </ul>	6
"ERROR"	<ul style="list-style-type: none"> <li>● Incorrect operation performed. Read the instructions and try again.</li> </ul>	—
"H□□", "F□□" □□ stands for a number.	<ul style="list-style-type: none"> <li>● Trouble may have occurred. The number following "H" or "F" depends on the status of the unit.</li> </ul> <p><b>Reset procedure:</b> Press [⏻] to switch the unit to the standby mode and then back to ON. Alternatively, press [⏻] to switch the unit to the standby mode, disconnect both AC power supply cords, and then reconnect. <ul style="list-style-type: none"> <li>● If the service numbers fail to clear, note the service number and contact a qualified service person.</li> </ul> </p>	— —

## Television display

"Cannot display group xx, picture xx"	<ul style="list-style-type: none"> <li>● You are trying to display incompatible pictures.</li> </ul>	—
No on-screen display.	<ul style="list-style-type: none"> <li>● Go to Display in the SETUP menus, and select "On" for "On-Screen Messages".</li> <li>● Go to OPTION in the VCR MENU, and select "ON" for "OSD".</li> </ul>	31 44
On-Screen Menu Icons not displayed or only partially displayed on the television.	<ul style="list-style-type: none"> <li>● Press [▲, ▼] while the rightmost icon is highlighted to move them down.</li> </ul>	28
The menu is displayed in a different language.	<ul style="list-style-type: none"> <li>● Go to Disc in the SETUP menus, and select the preferred language for "Menus".</li> <li>● Go to LANGUAGE in the VCR MENU, and select the preferred language for menus.</li> </ul>	31 42



INFO

## Decoder

A decoder restores the coded audio signals on DVDs to normal. This is called decoding.

## Dolby Digital

This is a method of coding digital signals developed by Dolby Laboratories. Apart from stereo (2-channel) audio, these signals can also be multi-channel audio. A large amount of audio information can be recorded on one disc using this method.

## Dolby Pro Logic

A surround system where a 4-channel audio track is recorded as 2 channels and then is reproduced to 4 channels for play. The surround channel is monaural and can reproduce up to 7 kHz.

## DTS (Digital Theater Systems)

This surround system is used in many movie theaters around the world. There is good separation between the channels, so realistic sound effects are possible.

## Dynamic range

Dynamic range is the difference between the lowest level of sound that can be heard above the noise of the equipment and the highest level of sound before distortion occurs.

## Film and video

DVD-Videos are recorded using either film or video. Usually, film is recorded at 24 frames per second, the rate movies are filmed at, while video is recorded at 30 frames per second.

## Frame still and field still

Frames are the still pictures that make moving pictures. About thirty are shown each second. A frame still may appear blurred but overall quality is high.

Two fields appear alternately to make up one frame. A field still is not blurred but picture quality is lower.

## Interlace and progressive output

NTSC, the video signal standard, has 480 interlaced (I) scan lines, whereas progressive scanning uses twice the number of scan lines. This is called 480P.

## I/P/B

MPEG 2, the video compression standard adopted for use with DVD-Video, codes frames using these 3 picture types.

**I:** Intra-coded picture

This picture has the best quality and is the best to use when adjusting the picture.

**P:** Predictive coded picture

This picture is calculated based on past I or P-pictures.

**B:** Bidirectionally-predictive coded picture

This picture is calculated by comparing past and future I and P-pictures so it has the lowest volume of information.

## Linear PCM (pulse code modulation)

These are uncompressed digital signals, similar to those found on CDs.

# Maintenance

## To clean this unit, wipe with a soft, dry cloth.

- Never use alcohol, paint thinner or benzene to clean this unit.
- Before using chemically treated cloth, read the instructions that came with the cloth carefully.

## Cleaning the video heads

Dirt on the video heads can cause poor recording and play.



To clean the heads, insert and eject a tape 5 to 10 times in succession.

If the picture does not improve, use an optional head-cleaning cassette (part number NV-TCL30PT). If the problem persists, seek advice from a qualified service person.



## ■ DISC SECTION

<b>Disc played</b>	(one layer per side)
<b>DVD-VIDEO/AUDIO</b>	8 cm/12 cm, single/double-sided, single/double layer
<b>CD/VCD/MP3/WMA</b>	8 cm/12 cm, CD-R/RW
<b>DVD-RAM/R (DVD-VIDEO formatted discs)</b>	
<b>HighMAT</b>	Level 2 (Audio and Image)
<b>Video</b>	
<b>Signal system</b>	NTSC
<b>Output level</b>	Composite video; 1 Vp-p (75 Ω) S-video; 1 Vp-p (Y), 0.286 Vp-p (C) (75 Ω) Component video; 1 Vp-p (Y) (75 Ω) 0.7 Vp-p (P <sub>B</sub> /C <sub>B</sub> , P <sub>R</sub> /C <sub>R</sub> ) (75 Ω)
<b>Audio</b>	
<b>Sampling frequency</b>	
<b>CD</b>	44.1 kHz
<b>MP3</b>	32 kHz, 44.1 kHz, 48 kHz
<b>DVD</b>	48 kHz, 96 kHz (video), 192 kHz (audio)
<b>Bitrate</b>	
<b>MP3</b>	32–320 kbps
<b>Decoding</b>	16/20/24 bit linear
<b>Pick up</b>	
<b>Beam Source</b>	Semiconductor Laser
<b>Wavelength</b>	
<b>CD/VCD</b>	780 nm
<b>DVD</b>	658 nm
<b>Number of channels</b>	5.1 ch (FL, FR, SL, SR, C, SW)
<b>Frequency response</b>	20 Hz–20 kHz (+1, –2 dB)
<b>Wow and flutter</b>	Less than possible measurement data
<b>Digital filter</b>	8 fs
<b>D/A converter</b>	Delta sigma DAC

## ■ VCR SECTION

<b>Video recording system</b>	2 rotary heads, helical scanning system
<b>Video heads</b>	4 heads
<b>Audio heads</b>	2 heads
<b>Tape speed</b>	SP; 33.35 mm/s, EP; 11.12 mm/s
<b>Tape format</b>	VHS tape
<b>Recording/playback time</b>	SP; 120 min. with NV-T120 EP; 360 min. with NV-T120
<b>FF/REW time</b>	Approx. 54 s. with NV-T120 (FF/REW) Approx. 36 s. with NV-T120 (JET REW)

## VIDEO

<b>Television system</b>	EIA; Standard (525 lines, 60 fields), NTSC color signal
<b>Modulation system</b>	Luminance; FM azimuth recording Color signal; converted subcarrier phase shift recording
<b>Input level</b>	VIDEO IN (PHONO); 1 Vp-p, 75 Ω
<b>Output level</b>	VIDEO OUT (PHONO); 1 Vp-p, 75 Ω
<b>Antenna receive input</b>	VHF 2–13 CH, 75 Ω UHF 14–69 CH, 75 Ω CATV 5A and A-5–EEE CH, 75 Ω

## AUDIO

<b>Input level</b>	AUDIO IN (PHONO); –10 dBV, 47 kΩ
<b>Output level</b>	AUDIO OUT (PHONO); –8 dBV, 1 kΩ
<b>Audio track</b>	1 track (normal-mono only), 2 channels (Hi-Fi sound stereo)
<b>Video horizontal resolution</b>	Color; more than 200 lines
<b>Signal-to-Noise ratio</b>	Video; more than 40 dB/SP Audio; more than 60 dB/Hi-Fi
<b>Audio frequency response</b>	20 Hz–20 kHz/Hi-Fi
<b>Wow and flutter</b>	0.005 % Wrms/Hi-Fi

## ■ FM TUNER SECTION

<b>Frequency range</b>	87.9–107.9 MHz (200-kHz step) 87.5–108.0 MHz (100-kHz step)
<b>Sensitivity</b>	2.5 μV (IHF)
<b>S/N 26 dB</b>	2.2 μV
<b>Antenna terminals</b>	75 Ω (unbalanced)
<b>Preset station</b>	15

## ■ AM TUNER SECTION

<b>Frequency range</b>	520–1710 kHz (10-kHz step)
<b>AM Sensitivity S/N 20 dB at 1000 kHz</b>	560 μV/m
<b>Preset station</b>	15

## ■ GENERAL

<b>Power supply</b>	AC 120 V, 60 Hz
<b>Power consumption</b>	
<b>Main unit</b>	38 W
<b>Active subwoofer</b>	
<b>SB-WA312</b>	160 W
<b>SB-WA310</b>	210 W
<b>SB-WA330</b>	
<b>Dimensions (W×H×D)</b>	430×93×356 mm (16 <sup>15</sup> / <sub>16</sub> "×3 <sup>21</sup> / <sub>32</sub> "×14 <sup>1</sup> / <sub>32</sub> ")
<b>Mass</b>	4.6 kg (10.1 lb.)

### Power consumption in standby mode

BRIGHT mode	Approx. 3.7 W
DIM mode	Approx. 3.5 W
OFF mode	Approx. 2.4 W

### Note

- Specifications are subject to change without notice.  
Mass and dimensions are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer.



# Limited Warranty (U.S.A.)

Panasonic Consumer Electronics Company,  
Division of Matsushita Electric Corporation of America  
One Panasonic Way Secaucus, New Jersey 07094

Panasonic Sales Company, Division of Matsushita Electric of Puerto Rico, Inc.  
Ave. 65 de Infantería, Km. 9.5  
San Gabriel Industrial Park, Carolina, Puerto Rico 00985

## Panasonic/Technics Audio Products Limited Warranty

### Limited Warranty Coverage

If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Electronics Company or Panasonic Sales Company (collectively referred to as "the warrantor") will, for the length of the period indicated on the chart below, which starts with the date of original purchase ("warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

Product or Part Name	Parts	Labor
Audio Products (except items listed below)	One (1) year	One (1) year
All Audio Racks (cabinets)	Thirty (30) days	Not Applicable
Technics Stand Alone Speakers, Subwoofer Speakers	Three (3) years	Three (3) years
USB Reader-Writer, Personal Computer Card Adapters (in exchange for defective item)	One (1) year	Not Applicable
Accessories: Headphones, Cartridges, Microphones, Adapters	Ninety (90) days	Ninety (90) days
Rechargeable Batteries (in exchange for defective item)	Ten (10) days	Not Applicable
SD Memory Cards, Rechargeable Battery Packs (in exchange for defective item)	Ninety (90) days	Not Applicable

During the "Labor" warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You must carry-in or mail-in your product during the warranty period. If non-rechargeable batteries are included, they are not warranted. This warranty only applies to products purchased and serviced in the United States or Puerto Rico. This warranty is extended only to the original purchaser of a new product which was not sold "as is". A purchase receipt or other proof of the original purchase date is required for warranty service.

### Carry-In or Mail-In Service

For Carry-In or Mail-In Service in the United States call 1-800-211-PANA (1-800-211-7262) or visit Panasonic web site: <http://www.panasonic.com>  
For assistance in Puerto Rico call Panasonic Sales Company (787)-750-4300 or fax (787)-768-2910.

### Limited Warranty Limits And Exclusions

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or commercial use (such as in a hotel, office, restaurant, or other business), rental use of the product, service by anyone other than a Factory Servicenter or other Authorized Servicer, or damage that is attributable to acts of God.

**THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY.** (As examples, this excludes damages for lost time, travel to and from the servicer, loss of media or images, data or other memory content. The items listed are not exclusive, but are for illustration only.) **ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.**

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the warrantor's Consumer Affairs Department at the addresses listed for the warrantor.

**PARTS AND SERVICE WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY ARE YOUR RESPONSIBILITY.**

## Customer Services Directory

**For Product Information, Operating Assistance, Literature Request, Dealer Locations, and all Customer Service inquiries please contact:**  
**1-800-211-PANA (7262), Monday–Friday 9 am–9 pm; Saturday–Sunday 9 am–7 pm, EST.**  
**or send e-mail:**  
**[consumerproducts@panasonic.com](mailto:consumerproducts@panasonic.com)**  
**For hearing or speech impaired TTY users, TTY: 1-877-833-8855**

**Web Site: <http://www.panasonic.com>**  
**You can purchase parts, accessories or locate your nearest servicenter by visiting our Web Site.**

### Accessory Purchases:

**1-800-332-5368 (Customer Orders Only)**  
**For hearing or speech impaired TTY users, TTY: 1-866-605-1277**  
**Panasonic Services Company 20421 84th Avenue South, Kent, WA 98032**  
**(6 am to 5 pm Monday–Friday; 6 am to 10:30 am Saturday; PST)**  
**(Visa, MasterCard, Discover Card, American Express, Check)**

### Service in Puerto Rico

**Matsushita Electric of Puerto Rico, Inc. Panasonic Sales Company/Factory Servicenter:**  
**Ave. 65 de Infantería, Km. 9.5, San Gabriel Industrial Park, Carolina, Puerto Rico 00985**  
**Phone (787) 750-4300 Fax (787) 768-2910**



INFO



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